KANSAS SURFACE WATER REGISTER

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prepared by

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SECTION ONE

DESIGNATED USES OF MAJOR CLASSIFIED STREAMS AND

STREAMS CONSTITUTING OUTSTANDING NATIONAL RESOURCE WATERS

Designations apply only to unimpounded reaches of the specified stream segments. Beneficial use designations for classified streams not listed in this table are determined by the Department on case-by-case basis in accordance with K.A.R. 28-16-28d(c).

Abbreviations:

CLASS = antidegradation category
GP = general purpose waters
EX = exceptional state waters
ON = outstanding national resource waters
X = referenced stream segment is designated for the indicated beneficial use
O = referenced stream segment does not support the indicated beneficial use
blank = capacity of the referenced stream segment to support the indicated beneficial use has not been determined
HUC = hydrologic unit code
SEG = stream segment
AL = designated for aquatic life use
S = special aquatic life use water
E = expected aquatic life use water
R = restricted aquatic life use water
PCR = designated for contact recreational use
DWS = designated for domestic water supply use
FP = designated for food procurement use
GWR = designated for ground water recharge
IWS = designated for industrial water supply use
IR = designated for irrigation use
LW = designated for livestock watering use
Cr = creek
R = river
Fk = fork
Br = branch
M = middle

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

CIMARRON RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER CIMARRON (HUC 11040002)														
Cimarron R	37.4128	101.1275	37.0682	102.0418	1	EX	S	O	X	X	X	X	X	X
SUBBASIN: NORTH FORK CIMARRON (HUC 11040003)														
Cimarron R, N Fk	37.4195	101.1133	37.4764	101.4869	1	GP	E	O	X	X	X	X	X	X
Cimarron R, N Fk	37.4764	101.4869	37.3000	101.6676	2	GP	E	O	X	X	X	X	X	X
Cimarron R, N Fk	37.3000	101.6676	37.2553	102.0415	4	EX	S	O	X	X	X	X	X	X
Unnamed Stream	37.3000	101.6676	37.3516	102.0408	3	EX	S	O	X	X	X	X	X	X
SUBBASIN: SAND ARROYO (HUC 11040004)														
Sand Arroyo Cr	37.4764	101.4869	37.4070	102.0413	1	GP	E	O	O	O		O	O	
SUBBASIN: BEAR (HUC 11040005)														
Bear Cr	37.8443	101.3300	37.5283	101.9829	1	GP	E	O	O	O		O	O	
Bear Cr	37.5203	102.0235	37.4904	102.0414	11	GP	E	O	O	O		O	O	
Bear Cr	37.5283	101.9829	37.5203	102.0235	9	GP	E	O	O	O		O	O	
Bear Cr, North	37.7735	101.8276	37.7482	102.0419	6	GP	E	O	O	O		O	O	
Beaty Cr	37.5283	101.9829	37.5423	102.0413	8	GP	E	O	O	O		O	O	
Buffalo Cr	37.5203	102.0235	37.5124	102.0412	10	GP	E	O	O	O		O	O	
Dry Cr	37.7897	101.9773	37.7904	102.0423	5	GP	E	O	O	O		O	O	
Little Bear Cr	37.7194	101.6733	37.6502	102.0412	7	GP	E	O	O	O		O	O	
Wolf Cr	37.6854	101.4646	37.7887	101.5751	2	GP	E	O	O	O		O	O	
SUBBASIN: UPPER CIMARRON-LIBERAL (11040006)														
Cimarron R	37.0057	100.3999	37.0007	100.5522	1	GP	S	X	X	X	X	X	X	X
Cimarron R	37.1234	100.7310	37.4552	101.0997	2	GP	S	X	X	X	X	X	X	X
SUBBASIN: CROOKED CREEK (HUC 11040007)														
Crooked Cr	37.0023	100.1438	37.2235	100.3597	1	GP	S	O	X	X	X	X	X	X
Crooked Cr	37.2235	100.3597	37.5923	100.6978	2	GP	E	O	X	X	X	X	X	X
Remuda Cr	37.0777	100.2820	37.1629	100.2794	4	GP	E							
Spring Cr	37.2235	100.3597	37.3836	100.5193	3	GP	S	X	X	X	X	X	X	X
Stumpie Arroyo	37.1331	100.3887	37.2139	100.5121	1247	GP	S	O						
Unnamed Stream	37.3070	100.3143	37.3392	100.3564	1180	GP	E	O		X	X			X
Unnamed Stream	37.1912	100.4768	37.2016	100.4782	1253	GP	S	O						
Unnamed Stream	37.1689	100.4470	37.1783	100.5039	1259	GP	S	O						
SUBBASIN: UPPER CIMARRON-BLUFF (HUC 11040008)														
Antelope Cr	37.0934	99.9100	37.2461	99.9819	16	GP	E							
Bear Cr	37.0541	99.7138	37.3047	99.7926	18	GP	E							
Big Sandy Cr	37.0417	99.7620	37.0621	99.8106	6	GP	E			X				

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

CIMARRON RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER CIMARRON-BLUFF (HUC 11040008)														
Big Sandy Cr	37.0621	99.8106	37.0681	99.8314	7	GP	E			X				
Big Sandy Cr	37.0681	99.8314	37.2073	100.3417	9	GP	E			X				
Bluff Cr	37.0680	99.4948	37.4999	100.0036	13	GP	S	X	X	X	X	X	X	X
Bluff Cr	37.0252	99.4713	37.0680	99.4948	2	GP	S	X	X	X	X	X	X	X
Bullard Cr	37.0621	99.8106	37.1077	100.2061	10	GP	E							
Cavalry Cr	37.1790	99.4680	37.4156	99.3675	3	GP	S	X	X	X	X	X	X	X
Cimarron R	36.9995	99.4561	37.0237	99.4749	1	EX	S	X	X	X	X	X	X	X
Cimarron R	37.0374	99.7651	37.0013	99.8358	11	EX	S	X	X	X	X	X	X	X
Cimarron R	37.0252	99.4713	37.0417	99.7620	5	EX	S	X	X	X	X	X	X	X
Day Cr	37.0673	99.6139	37.2703	99.6729	20	GP	E							
Gyp Cr	37.1678	100.0654	37.3707	100.1102	25	GP	E							
Indian Cr	37.1553	100.0453	37.3480	100.0124	14	GP	E							
Kiger Cr	37.0681	99.8314	37.3549	99.9529	8	GP	E							
Kiowa Cr	37.1790	99.4680	37.4912	99.4331	12	GP	S							
Kiowa Cr, Middle	37.3516	99.4845	37.4999	99.4988	1182	GP	S	O	X	X	X	X	X	X
Kiowa Cr, West	37.3140	99.4728	37.4498	99.6408	1180	GP	S	O	X	X	X	X	X	X
Little Sandy Cr	37.0611	99.8069	37.3551	99.9181	652	GP	E							
Snake Cr	37.0620	99.6073	37.0002	99.6613	21	GP	E							
Stink Cr	37.0443	99.7863	37.0047	99.8660	17	GP	E							
Trout Cr	37.0540	99.5457	37.0152	99.5856	19	GP	E							
Twomile Cr	37.1267	100.0096	37.1376	100.1553	15	GP	E							
Wiggins Cr	37.3695	99.4529	37.4888	99.4607	1173	GP	S	O						
SUBBASIN: LOWER CIMARRON-EAGLE CHIEF (HUC 11050001)														
Anderson Cr	36.9999	99.3567	37.0214	99.3335	39	GP	E							
Keno Cr	36.9995	99.2928	37.0000	99.2926	22	GP	E							
West Cr	36.9996	99.4176	37.0791	99.3493	24	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: MIDDLE REPUBLICAN (HUC 10250016)														
Advent Cr	40.0024	98.4037	39.9854	98.4044	64	GP	E							
Antelope Cr	39.8966	98.2621	39.9750	98.3116	66	GP	E							
Ash Cr	39.8755	98.4429	39.9855	98.4901	65	GP	E							
Ayres Cr	40.0024	98.3061	39.9804	98.3119	70	GP	E							
Bean Cr	39.8993	97.9228	39.9416	98.0196	76	GP	E							
Big Timber Cr	39.8917	98.1597	39.8061	98.2480	1301	GP	E							
Buffalo Cr	40.0024	98.6403	39.9799	98.6409	59	GP	E	X						
Burr Oak Cr	39.8726	98.3106	39.9939	98.4521	48	GP	E			X				
Calumet Cr	40.0022	98.9683	39.9912	98.9766	54	GP	E							
Cedar Cr	40.0025	98.5092	39.9978	98.5100	63	GP	E							
Cora Cr	39.8990	98.5603	39.9378	98.7244	51	GP	E			X				X
Crosby Cr	39.9954	97.9749	40.0022	97.9735	77	GP	E							
Crow Cr	40.0020	99.1624	39.9345	99.2399	52	GP	E							
Dry Cr	39.8418	97.8302	39.8993	97.7084	80	GP	E			X				
Forsha Cr	39.9910	97.9067	40.0022	97.9154	86	GP	E							
Korb Cr	39.8995	98.2067	39.9748	98.2439	72	GP	E							
Lohff Cr	40.0024	98.8314	39.9826	98.8310	56	GP	E							
Long Branch	39.8986	98.2405	39.9766	98.2761	68	GP	E							
Lost Cr	40.0022	99.0168	39.9551	99.0116	53	GP	E							
Louisa Cr	40.0023	98.5838	39.9824	98.5757	61	GP	E							
Norway Cr	39.8977	98.1575	39.9679	98.2032	73	GP	E							
Oak Cr	40.0024	98.2116	39.9620	98.2094	75	GP	E							
Otter Cr	39.9068	97.8404	40.0021	97.7719	79	GP	E							
Rankin Cr	40.0024	98.3461	39.9834	98.3522	69	GP	E							
Rebecca Cr	40.0021	99.1067	39.9569	99.1501	39	GP	E							
Republican R	39.7927	97.7894	39.9197	97.8553	1	GP	S	X	X	X	X	X	X	X
Republican R	39.9197	97.8553	40.0022	98.0869	2	GP	S	X	X	X	X	X	X	X
Rock Cr	40.0022	98.7699	39.9840	98.7690	57	GP	E							
Spring Cr	39.8957	98.1893	39.8527	98.2233	71	GP	E							
Spring Cr	39.9420	97.8629	39.9551	97.9863	78	GP	E							
State Cr	40.0025	98.6064	39.9999	98.6065	62	GP	E							
Taylor Cr	39.8984	98.1583	39.9694	98.1863	74	GP	E							
Walnut Cr	40.0025	98.6898	39.9725	98.8101	40	GP	E							
Walnut Cr	39.8837	98.2891	39.9875	98.3708	46	GP	E							
White Rock Cr	39.9197	97.8553	39.8846	98.0280	41	GP	E	X	X	X	X	X	X	X
White Rock Cr	39.8999	98.1457	39.8837	98.2891	45	GP	E	X	X	X	X	X	X	X
White Rock Cr	39.8837	98.2891	39.8726	98.3106	47	GP	E	X	X	X	X	X	X	X
White Rock Cr	39.8726	98.3106	39.8990	98.5603	49	GP	E	X	X	X	X	X	X	X
White Rock Cr	39.8990	98.5603	39.9550	98.6667	50	GP	E	X	X	X	X	X	X	X
White Rock Cr, N Br	39.8779	98.4776	39.9788	98.5839	60	GP	E							
Wolf Cr	39.8913	98.2773	39.9439	98.3184	67	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER REPUBLICAN (HUC 10250017)														
Beaver Cr	39.7109	97.8014	39.8565	97.9168	45	GP	E			X				
Beaver Cr	39.5605	97.3760	39.4796	97.4332	61	GP	E			X				
Buffalo Cr	39.5945	97.7140	39.6196	97.8733	29	GP	E			X				
Buffalo Cr	39.6196	97.8733	39.8056	98.2368	37	GP	E	X		X				
Buffalo Cr, East	39.6705	98.1396	39.8245	98.1392	68	GP	E							
Cheyenne Cr	39.6145	97.8571	39.5114	97.9124	55	GP	E							
Coal Cr	39.6820	97.5601	39.7886	97.5540	47	GP	E							
Cool Cr	39.5949	97.6408	39.6702	97.6653	50	GP	E							
Dry Cr	39.3802	97.1347	39.4877	97.1846	1369	GP	E							
Dry Cr	39.6416	98.1256	39.6722	98.2117	43	GP	E							
East Cr	39.6578	97.5634	39.8231	97.5148	21	GP	E							
Elk Cr	39.5857	97.3770	39.6344	97.4244	14	GP	E	X		X				
Elk Cr	39.6344	97.4244	39.7738	97.3920	15	GP	E	X		X				
Elk Cr, W Fk	39.6344	97.4244	39.7809	97.4547	16	GP	E			X				
Elm Cr	39.5738	97.4440	39.4400	97.6131	39	GP	E	X		X				
Elm Cr, E Br	39.5289	97.4642	39.4120	97.5182	62	GP	E							
Elm Cr, W Br	39.5050	97.5282	39.4336	97.6049	59	GP	E							
Finney Cr	39.3564	97.1071	39.4589	97.0511	64	GP	E							
Five Cr	39.3610	97.1611	39.3753	97.4085	413	GP	E							
Fourmile Cr	39.0701	96.8594	39.1426	96.8459	67	GP	E	X						
Hay Cr	39.5908	97.6694	39.6783	97.6886	49	GP	E							
Huntress Cr	39.3591	97.1302	39.3802	97.1347	9354	GP	E							
Lincoln Cr	39.3269	97.0812	39.4303	97.0143	65	GP	E							
Lost Cr	39.5891	97.6598	39.5144	97.6786	57	GP	E							
Marsh Cr	39.7069	97.9410	39.8568	97.9658	35	GP	E			X				
Marsh Cr, West	39.7069	97.9410	39.8125	98.1072	36	GP	E			X				
Marsh Cr, East	39.7374	97.9505	39.8380	98.0853	42	GP	E			X				
Millers Cr	39.4591	97.2258	39.3997	97.5166	40	GP	E			X				
Mud Cr	39.5470	97.3380	39.4913	97.3566	63	GP	E							
Oak Cr	39.6666	97.7956	39.6968	97.8500	48	GP	E							
Oak Cr	39.5804	97.5733	39.4318	97.6518	58	GP	E							
Otter Cr	39.3108	97.0696	39.2217	97.1492	66	GP	E	X						
Parsons Cr	39.5581	97.2628	39.7499	97.3377	12	GP	E							
Peats Cr	39.5057	97.2319	39.7928	97.2049	10	GP	E							
Plum Cr	39.5759	97.5623	39.5048	97.5938	60	GP	E							
Republican R	39.0594	96.8019	39.0763	96.8960	1	GP	S	X	X	X	X	X	X	X
Republican R	39.5057	97.2319	39.5581	97.2628	11	GP	S	X	X	X	X	X	X	X
Republican R	39.5420	97.2720	39.5718	97.4351	13	GP	S	X	X	X	X	X	X	X
Republican R	39.5857	97.3770	39.5718	97.4351	17	GP	S	X	X	X	X	X	X	X
Republican R	39.5738	97.4440	39.5804	97.5350	18	GP	S	X	X	X	X	X	X	X
Republican R	39.5804	97.5350	39.5842	97.6932	26	GP	S	X	X	X	X	X	X	X
Republican R	39.5842	97.6932	39.5945	97.7140	27	GP	S	X	X	X	X	X	X	X
Republican R	39.5945	97.7140	39.7921	97.7897	28	GP	S	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER REPUBLICAN (HUC 10250017)														
Republican R	39.3015	97.0475	39.4591	97.2258	8	GP	S	X	X	X	X	X	X	X
Republican R	39.5420	97.2720	39.5057	97.2319	9	GP	S	X	X	X	X	X	X	X
Riley Cr	39.7331	97.5938	39.8930	97.6475	24	GP	E			X				
Rush Cr	39.1713	96.8441	39.1271	96.8849	1477	GP	E							
Salt Cr	39.5959	97.5258	39.6497	97.5640	19	GP	E	X		X				
Salt Cr	39.6497	97.5640	39.6578	97.5634	20	GP	E	X		X				
Salt Cr	39.6578	97.5634	39.7331	97.5938	22	GP	E	X		X				
Salt Cr	39.7331	97.5938	39.9018	97.6010	23	GP	E	X		X				
Salt Cr	39.6196	97.8733	39.6455	97.8899	30	GP	E	X		X				
Salt Cr	39.6777	97.9173	39.7069	97.9410	34	GP	E	X		X				
Salt Cr, West	39.6497	97.5640	39.8995	97.6959	25	GP	E			X				
Spring Cr	39.3802	97.1347	39.4954	97.0611	1354	GP	E							
Spring Cr	39.6473	98.0736	39.7620	98.1093	44	GP	E							
Spring Cr	39.5798	97.1882	39.6645	97.1840	53	GP	E							
Timber Cr	39.2343	96.9740	39.3880	96.8973	6	GP	E	X	X					
Turkey Cr	39.6981	97.5427	39.7346	97.4852	51	GP	E							
Upton Cr	39.6074	97.4918	39.7000	97.4955	52	GP	E							
Whites Cr	39.5948	97.8034	39.4746	97.8724	54	GP	E			X				
Wolf Cr	39.5842	97.6932	39.4394	97.6616	38	GP	E	X		X				
Wolf Cr, W Br	39.5398	97.7268	39.4655	97.8106	56	GP	E							
SUBBASIN: UPPER KANSAS (HUC 10270101)														
Clarks Cr	39.0886	96.7109	39.0479	96.7309	8	GP	E	X		X				
Clarks Cr	39.0479	96.7309	38.6762	96.8014	9	GP	E	X		X				
Davis Cr	38.9605	96.7513	38.8521	96.6477	18	GP	E			X				
Dry Cr	38.9918	96.7393	38.8726	96.6043	19	GP	E			X				
Humbolt Cr	39.0479	96.7309	38.8926	96.5359	10	GP	E			X				
Kansas R	39.1855	96.5251	39.1411	96.5600	1	GP	S	X	X	X	X	X	X	X
Kansas R	39.1596	96.5613	39.1426	96.6469	3	GP	S	X	X	X	X	X	X	X
Kansas R	39.0906	96.7060	39.1348	96.6507	4	GP	S	X	X	X	X	X	X	X
Kansas R	39.1348	96.6507	39.0906	96.7060	6	GP	S	X	X	X	X	X	X	X
Kansas R	39.0595	96.7919	39.0595	96.7919	7	GP	S	X	X	X	X	X	X	X
Kitten Cr	39.2144	96.7024	39.2674	96.6905	14	GP	E							
Little Arkansas Cr	39.2380	96.7670	39.2856	96.8548	13	GP	E							
Little Kitten Cr	39.1841	96.6248	39.2286	96.6442	16	GP	E							
Mcdowell Cr	39.1305	96.5824	38.9771	96.5125	11	GP	E	X		X				
Mulberry Cr	38.8291	96.8241	38.7528	96.7903	20	GP	E							
Ralls Cr	38.8593	96.7896	38.8035	96.7355	21	GP	E							
Sevenmile Cr	39.1348	96.6507	39.2050	96.8248	5	GP	E							
Silver Cr	39.2230	96.7208	39.3020	96.7783	12	GP	E	X	X	X	X	X	X	X
Swede Cr	39.0333	96.5977	39.0809	96.5620	17	GP	E			X				
Threemile Cr	39.0847	96.7315	39.1736	96.8386	15	GP	E	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER KANSAS (HUC 10270101)														
Wildcat Cr	39.1596	96.5613	39.3518	96.8720	2	GP	S	X	X	X	X	X	X	X
SUBBASIN: MIDDLE KANSAS (HUC 10270102)														
Adams Cr	39.2654	96.2526	39.4211	96.3247	53	GP	E			X				
Antelope Cr	39.1709	96.3281	39.0761	96.4078	67	GP	E	X						
Bartlett Cr	39.3187	96.0585	39.3990	96.1106	55	GP	E							
Big Elm Cr	39.2748	95.7580	39.3450	95.7331	90	GP	E							
Blackjack Cr	39.1870	96.4226	39.2367	96.4114	64	GP	E							
Blacksmith Cr	39.0637	95.8409	38.9831	95.8547	102	GP	E							
Bourbonais Cr	39.1199	96.0150	39.2700	96.0785	63	GP	E			X				
Brush Cr	39.2599	96.3378	39.3767	96.3346	57	GP	E							
Coal Cr	39.5344	96.0991	39.6393	96.1418	46	GP	E							
Coryell Cr	39.2107	95.9489	39.2482	95.9194	94	GP	E							
Cow Cr	39.5090	96.1334	39.4642	96.1045	45	GP	E							
Cross Cr	39.1094	95.9666	39.4982	96.0349	12	GP	E	X		X				
Crow Cr	39.3213	95.9075	39.4130	95.8498	86	GP	E							
Darnells Cr	39.4029	96.3966	39.4429	96.3242	51	GP	E							
Deep Cr	39.2024	96.1115	39.2826	96.1138	1229	GP	E							
Deep Cr	39.1570	96.3613	39.0192	96.4761	26	EX	S	X	X	X	X	X	X	X
Deep Cr, E Br	39.0773	96.4959	39.0670	96.4088	72	GP	E	X	X	X	X	X	X	X
Deer Cr	39.0530	95.6251	38.9610	95.6208	41	GP	E	X	X	X	X	X	X	X
Dog Cr	39.0717	96.1052	39.0151	96.0685	78	GP	E							
Doyle Cr	39.1544	96.0541	39.2566	96.0770	69	GP	E							
Dry Cr	39.0674	96.0167	39.0005	96.0346	79	GP	E							
Dutch Cr	39.2427	95.8848	39.3132	95.8248	92	GP	E							
Elm Cr	39.0753	95.5296	39.1379	95.5456	103	GP	E							
Elm Cr	39.1644	95.5945	39.2015	95.6611	98	GP	E							
Elm Slough	39.2516	96.3296	39.2068	96.3861	58	GP	E							
Emmons Cr	39.1583	96.3761	39.0943	96.4043	66	GP	E							
French Cr	39.5011	96.1492	39.6440	96.1661	19	GP	E							
Gilson Cr	39.5758	96.2213	39.6249	96.2342	47	GP	E							
Halfday Cr	39.1031	95.6975	39.2422	95.7054	97	GP	E	X	X	X	X	X	X	X
Hendricks Cr	39.0330	96.2684	39.0680	96.4037	73	GP	E							
Hise Cr	39.4799	96.1576	39.5239	96.2790	43	GP	E							
Illinois Cr	38.9742	96.3397	38.8380	96.3462	30	EX	S	X	X	X	X	X	X	X
Illinois Cr	39.2664	96.0150	39.3460	95.9731	62	GP	E	X	X	X	X	X	X	X
Indian Cr	39.0965	95.6497	39.2054	95.6716	1365	GP	E	O	X	X	X	X	X	X
Indian Cr	39.3329	96.2166	39.4784	96.2955	20	GP	E		X	X	X	X	X	X
James Cr	39.2573	95.8889	39.3313	95.8216	87	GP	E							
Jim Cr	39.3919	96.1778	39.4750	96.2732	52	GP	E							
Johnson Cr	38.9573	96.0156	39.0051	96.0609	84	GP	E							
Kansas R	39.0443	95.3750	39.0679	95.5178	1	GP	S	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: MIDDLE KANSAS (HUC 10270102)														
Kansas R	39.0734	95.7010	39.0648	95.8335	10	GP	S	X	X	X	X	X	X	X
Kansas R	39.0648	95.8335	39.1085	95.9923	11	GP	S	X	X	X	X	X	X	X
Kansas R	39.1094	95.9666	39.1199	96.0150	13	GP	S	X	X	X	X	X	X	X
Kansas R	39.1085	95.9923	39.1978	96.2475	14	GP	S	X	X	X	X	X	X	X
Kansas R	39.1978	96.2475	39.1570	96.3613	24	GP	S	X	X	X	X	X	X	X
Kansas R	39.1570	96.3613	39.1855	96.5251	25	GP	S	X	X	X	X	X	X	X
Kansas R	39.0679	95.5178	39.0543	95.5709	3	GP	S	X	X	X	X	X	X	X
Kansas R	39.0527	95.5811	39.0734	95.7010	4	GP	S	X	X	X	X	X	X	X
Kuenzli Cr	39.0553	96.2030	38.9444	96.1301	82	GP	E							
Little Cross Cr	39.2838	96.0341	39.4176	95.9805	61	GP	E							
Little Muddy Cr	39.0886	95.6021	39.1673	95.6381	99	GP	E							
Little Soldier Cr	39.1268	95.7947	39.1839	95.7983	6	GP	E	X	X	X	X	X	X	X
Little Soldier Cr	39.1839	95.7983	39.4107	95.8445	7	GP	E	X	X	X	X	X	X	X
Loire Cr	38.9845	96.3271	39.0618	96.4047	80	GP	E							
Lost Cr	39.1937	96.1561	39.3416	96.1571	60	GP	E							
Messhoss Cr	39.1108	95.7738	39.1896	95.7434	96	GP	E							
Mill Cr	39.1085	95.9923	39.0038	96.2809	27	EX	S	X	X	X	X	X	X	X
Mill Cr, E Br	39.0038	96.2809	38.9602	96.2670	31	EX	S	X	X	X	X	X	X	X
Mill Cr, E Br	38.9602	96.2670	38.8885	96.1109	33	EX	S	X	X	X	X	X	X	X
Mill Cr, S Br	38.9602	96.2670	38.8275	96.2217	32	GP	S	X	X	X	X	X	X	X
Mill Cr, W Br	39.0038	96.2809	38.9742	96.3397	28	EX	E	X	X	X	X	X	X	X
Mill Cr, W Br	38.9742	96.3397	38.8603	96.5404	29	EX	E	X	X	X	X	X	X	X
Mission Cr	39.0648	95.8335	38.9890	95.9353	34	GP	E	X	X	X	X	X	X	X
Mission Cr	38.9890	95.9353	38.9519	95.9737	36	GP	E	X	X	X	X	X	X	X
Mission Cr	38.9519	95.9737	38.8843	96.1001	37	GP	E	X	X	X	X	X	X	X
Mission Cr, N Br	38.9499	96.0384	38.9382	96.1117	83	GP	E	X						
Mission Cr, S Br	38.9519	95.9737	38.8983	96.0127	38	GP	E	X	X					
Mud Cr	39.5530	96.2095	39.5704	96.2592	44	GP	E							
Mud Cr	39.3236	96.4655	39.3414	96.5292	56	GP	E							
Muddy Cr	39.0679	95.5178	39.3024	95.6946	2	GP	E	X		X				
Muddy Cr, W Fk	39.2159	95.6154	39.2988	95.7105	93	GP	E			X				
Mulberry Cr	39.5970	96.1955	39.6471	96.2226	42	GP	E							
Mulberry Cr	39.0709	96.1400	39.1171	96.2465	77	GP	E							
Nehring Cr	38.9496	96.2438	38.8925	96.1104	81	GP	E			X				
Paw Paw Cr	39.0509	96.2300	39.1083	96.3004	75	GP	E							
Pleasant Hill Run	39.2686	96.3958	39.3955	96.5112	23	GP	E			X				
Pomeroy Cr	39.3392	96.2147	39.3526	96.1578	59	GP	E							
Post Cr	39.0875	95.9146	39.0147	95.9753	101	GP	E							
Pretty Cr	39.0452	96.2453	39.0761	96.3178	74	GP	E							
Riley Cr	39.1942	96.0865	39.2708	96.0931	1223	GP	E							
Rock Cr	39.2409	96.2463	39.2686	96.3958	21	GP	E			X				
Rock Cr, E Fk	39.2686	96.3958	39.4921	96.3163	22	GP	E			X				
Ross Cr	38.9890	95.9353	38.9849	95.9834	35	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: MIDDLE KANSAS (HUC 10270102)														
Salt Cr	39.2365	95.9675	39.3044	95.9457	88	GP	E							
Sand Cr	39.1865	96.4609	39.2268	96.4493	65	GP	E							
Shunganunga Cr	39.0527	95.5811	39.0531	95.6249	39	GP	E	X	X	X	X	X	X	X
Shunganunga Cr	39.0530	95.6251	38.9804	95.8109	40	GP	E	X	X	X	X	X	X	X
Shunganunga Cr, S Br	39.0171	95.7123	38.9386	95.6993	106	GP	E		X	X	X	X	X	X
Snake Cr	39.1645	95.9597	39.2146	96.0116	95	GP	E							
Snokomo Cr	39.0614	96.1457	38.9456	96.1222	85	GP	E							
Soldier Cr	39.0862	95.6266	39.1268	95.7947	5	GP	E	X	X	X	X	X	X	X
Soldier Cr	39.1268	95.7947	39.6524	95.9824	9	GP	E	X	X	X	X	X	X	X
Spring Cr	39.0643	95.4641	39.0158	95.4987	105	GP	E							
Spring Cr	39.5225	96.1134	39.4639	96.0747	48	GP	E							
Spring Cr	39.4061	96.1655	39.3644	96.1411	54	GP	E							
Spring Cr	39.0613	96.1938	39.1049	96.2300	76	GP	E							
Stinson Cr	39.0518	95.5843	38.9866	95.5942	394	GP	E	O	X	X	X	X	X	X
Sullivan Cr	39.2470	95.9878	39.3437	95.9636	89	GP	E							
Tecumseh Cr	39.0543	95.5709	38.9583	95.5644	107	GP	E		X	X	X	X	X	X
Turkey Cr	39.1239	96.0357	39.1215	96.1565	71	GP	E							
Unnamed Stream	39.1277	95.6526	39.1451	95.6354	1367	GP	E	O	X	X	X	X	X	X
Unnamed Stream	39.1160	95.7014	39.1281	95.7241	1389	GP	E	O	X	X	X	X	X	X
Unnamed Stream	38.9085	96.2148	38.8285	96.1887	693	EX	S	X	X	X	X	X	X	X
Unnamed Stream	39.1839	95.7983	39.2350	95.8023	8	GP	E							
Vassar Cr	39.0845	95.9071	39.0033	95.9580	100	GP	E							
Vermillion Cr	39.2127	96.2344	39.2409	96.2463	15	GP	E			X				
Vermillion Cr	39.2409	96.2463	39.3329	96.2166	16	GP	E	X	X	X	X	X	X	X
Vermillion Cr	39.3329	96.2166	39.5011	96.1492	17	GP	E	X	X	X	X	X	X	X
Vermillion Cr	39.5011	96.1492	39.6553	96.0000	18	GP	E	X	X	X	X	X	X	X
Walnut Cr	39.1605	95.8554	39.2807	95.8078	91	GP	E			X				
Wells Cr	39.1909	96.1690	39.1311	96.2674	68	GP	E							
Whetstone Cr	39.0648	95.5326	38.9864	95.5453	104	GP	E							
Wilson Cr	39.3412	96.4328	39.4715	96.4500	50	GP	E							
Wolf Cr	39.5505	96.0430	39.6019	96.0037	49	GP	E							
SUBBASIN: DELAWARE (HUC 10270103)														
Banner Cr	39.4718	95.7176	39.4431	95.8705	45	GP	E		X					
Barnes Cr	39.6890	95.8584	39.6874	95.9434	39	GP	E							
Bills Cr	39.4687	95.6488	39.4059	95.7879	47	GP	E							
Brush Cr	39.6381	95.4298	39.6333	95.3983	44	GP	E							
Brush Cr	39.3359	95.4470	39.3467	95.3618	54	GP	E							
Burr Oak Cr	39.2220	95.3384	39.1905	95.3130	8	GP	E		X					
Catamount Cr	39.4209	95.5165	39.3929	95.5720	49	GP	E							
Cedar Cr	39.3512	95.4654	39.3419	95.5631	32	GP	E	X		X				
Cedar Cr	39.8443	95.7909	39.9098	95.8477	37	GP	E	X		X				

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: DELAWARE (HUC 10270103)														
Cedar Cr. North	39.3419	95.5631	39.3928	95.7043	46	GP	E			X				
Cedar Cr. South	39.3419	95.5631	39.4023	95.7865	9032	GP	E	X		X				
Claywell Cr	39.1779	95.5320	39.2348	95.5306	56	GP	E		X					
Clear Cr	39.6196	95.5162	39.6590	95.3847	19	GP	E							
Coal Cr	39.3840	95.4932	39.4977	95.4257	50	GP	E			X				
Delaware R	39.0593	95.3968	39.1137	95.4256	1	GP	E	X	X	X	X	X	X	X
Delaware R	39.2855	95.4526	39.3512	95.4654	12	GP	E	X	X	X	X	X	X	X
Delaware R	39.3512	95.4654	39.4550	95.5410	13	GP	E	X	X	X	X	X	X	X
Delaware R	39.4550	95.5410	39.4805	95.5466	14	GP	E	X	X	X	X	X	X	X
Delaware R	39.4805	95.5466	39.5427	95.5245	15	GP	E	X	X	X	X	X	X	X
Delaware R	39.5427	95.5245	39.5625	95.5345	17	GP	E	X	X	X	X	X	X	X
Delaware R	39.5625	95.5345	39.6380	95.6239	21	GP	E	X	X	X	X	X	X	X
Delaware R	39.6380	95.6239	39.6772	95.6607	22	GP	E	X	X	X	X	X	X	X
Delaware R	39.6772	95.6607	39.9239	95.8461	23	GP	E	X	X	X	X	X	X	X
Elk Cr	39.4550	95.5410	39.4762	95.7647	29	GP	E	X		X				
Elk Cr	39.4762	95.7647	39.6247	95.9262	30	GP	E	X		X				
Gregg Cr	39.6772	95.6607	39.8750	95.8591	24	GP	E			X				
Honey Cr	39.2413	95.3076	39.2970	95.2758	55	GP	E							
Little Delaware R	39.5625	95.5345	39.6196	95.5162	18	GP	E							
Little Delaware R	39.6196	95.5162	39.7647	95.6337	20	GP	E							
Little Grasshopper Cr	39.5427	95.5245	39.6371	95.3335	16	GP	E							
Little Slough Cr	39.2166	95.4246	39.2614	95.3412	805	GP	E							
Little Wild Horse Cr	39.0829	95.3967	39.1700	95.3359	57	GP	E							
Mission Cr	39.6453	95.5180	39.7148	95.5336	40	GP	E		X	X	X	X	X	X
Mosquito Cr	39.5761	95.7322	39.6171	95.8882	602	GP	E							
Muddy Cr	39.6380	95.6239	39.6362	95.7583	25	GP	E	X		X				
Muddy Cr	39.6362	95.7583	39.8163	95.8931	26	GP	E	X		X				
Nebo Cr	39.4491	95.5386	39.4251	95.6472	48	GP	E							
Negro Cr	39.5350	95.5291	39.5942	95.6441	43	GP	E							
Otter Cr	39.6327	95.5177	39.7111	95.4395	41	GP	E							
Plum Cr	39.6877	95.6931	39.8107	95.7723	36	GP	E			X				
Rock Cr	39.1711	95.5225	39.2892	95.6065	34	GP	E		X	X				
Rock Cr	39.3174	95.4384	39.3282	95.3414	53	GP	E			X				
Slough Cr	39.1930	95.3926	39.2220	95.3384	7	GP	E	X	X	X				
Slough Cr	39.2220	95.3384	39.2057	95.2196	9	GP	E	X	X	X				
Spring Cr	39.5480	95.6968	39.6701	95.9640	42	GP	E							
Squaw Cr	39.7112	95.6685	39.7938	95.6912	38	GP	E							
Straight Cr	39.4805	95.5466	39.5739	95.8558	28	GP	E			X				
Tick Cr	39.1986	95.5542	39.2715	95.5476	52	GP	E		X					
Unnamed Stream	39.4762	95.7647	39.4691	95.8179	31	GP	E							
Walnut Cr	39.3506	95.4553	39.4043	95.3359	51	GP	E			X				
Wolfley Cr	39.6362	95.7583	39.7562	95.9122	27	GP	E			X				

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER KANSAS (HUC 10270104)														
Baldwin Cr	39.0120	95.2698	38.9686	95.3577	69	GP	E							
Barber Cr	39.0877	94.7142	39.0406	94.7250	373	GP	E	O	X	X	X	X	X	X
Brenner Heights Cr	39.1046	94.7082	39.1417	94.6988	1175	GP	E	O	X	X	X	X	X	X
Brush Cr	39.2500	95.0832	39.2918	95.0623	49	GP	E							
Brush Cr, West	39.3139	95.1101	39.3296	95.1915	46	GP	E							
Buck Cr	39.0432	95.2922	39.1733	95.2799	22	GP	S	X	X	X	X	X	X	X
Burys Cr	38.8861	95.6290	38.8175	95.7033	32	GP	E	X		X				
Buttermilk Cr	39.3584	95.1115	39.3765	95.1860	44	GP	E							
Camp Cr	39.4789	95.2272	39.5680	95.2912	41	GP	E		X	X	X	X	X	X
Camp Cr	38.8916	95.5279	38.7798	95.5876	66	GP	E	X	X	X	X	X	X	X
Camp Cr	38.9637	94.9181	38.8816	94.9158	74	GP	E		X	X	X	X	X	X
Captain Cr	38.9729	95.0405	38.7592	95.1335	72	GP	E		X	X	X	X	X	X
Cedar Cr	38.9821	94.9197	38.8185	94.8773	38	GP	E	X	X	X	X	X	X	X
Chicken Cr	38.8678	95.3380	38.8110	95.3313	79	GP	E							
Clear Cr	39.0170	94.8155	38.9574	94.8646	383	GP	E		X	X	X	X	X	X
Coal Cr	38.9131	95.1844	38.7804	95.1435	80	GP	E	X		X				
Cow Cr	39.0288	95.0967	39.0773	95.1041	58	GP	E							
Crooked Cr	39.4587	95.1895	39.4281	95.2399	10	GP	E			X				
Crooked Cr	39.4281	95.2399	39.3047	95.2962	12	GP	E			X				
Dawson Cr	39.3338	95.1140	39.3505	95.2086	45	GP	E							
Deer Cr	38.9637	95.4468	38.9550	95.5603	701	GP	E							
Elk Cr	38.8884	95.4830	38.7768	95.5440	68	GP	E		X	X				
Fall Cr	39.2285	95.0735	39.2050	95.1974	52	GP	E		X					
Hanson Cr	38.9587	94.9707	38.9392	95.0093	437	GP	E		X	X	X	X	X	X
Hays Cr	39.0397	94.8095	39.0155	94.7647	406	GP	E							
Hog Cr	39.1287	95.0112	39.0855	94.9599	54	GP	E							
Howard Cr	39.4111	95.2437	39.3560	95.2247	43	GP	E							
Hulls Branch	39.3974	95.2597	39.3378	95.2434	42	GP	E							
Indian Cr	39.2888	95.1982	39.3480	95.2208	48	GP	E							
Jarbalo Cr	39.1868	95.0494	39.1922	95.1446	51	GP	E							
Kansas R	39.1126	94.6070	39.0426	94.7970	1	GP	S	X	X	X	X	X	X	X
Kansas R	38.9977	95.0269	38.9729	95.0405	18	GP	S	X	X	X	X	X	X	X
Kansas R	38.9648	95.1968	38.9815	95.1637	19	GP	S	X	X	X	X	X	X	X
Kansas R	39.0426	94.7970	38.9821	94.9197	2	GP	S	X	X	X	X	X	X	X
Kansas R	38.9648	95.1968	39.0307	95.3378	21	GP	S	X	X	X	X	X	X	X
Kansas R	39.0432	95.2922	39.0371	95.3625	23	GP	S	X	X	X	X	X	X	X
Kansas R	38.9809	94.9562	38.9930	94.9815	3	GP	S	X	X	X	X	X	X	X
Kansas R	38.9809	94.9562	38.9736	95.0362	4	GP	S	X	X	X	X	X	X	X
Kent Cr	38.9703	95.1217	39.0173	95.1481	73	GP	E							
Kill Cr	38.9809	94.9562	38.8196	94.9678	37	GP	E		X	X	X	X	X	X
Little Cedar Cr	38.9167	94.8865	38.8549	94.8252	76	GP	E		X	X	X	X	X	X
Little Kaw Cr	39.0370	94.8901	39.0855	94.9529	59	GP	E	X						
Little Mill Cr	39.0071	94.8154	38.9522	94.7522	78	GP	E		X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER KANSAS (HUC 10270104)														
Little Sandy Cr	39.1792	94.9881	39.2346	94.9667	883	GP	E							
Little Stranger Cr	39.1446	95.0144	39.2968	95.0213	881	GP	E							
Little Stranger Cr	39.5194	95.3348	39.4363	95.3810	959	GP	E							
Little Turkey Cr	39.0621	94.7662	39.1180	94.8396	62	GP	S		X	X	X	X	X	X
Little Wakarusa Cr	38.9264	95.1361	38.8229	95.1188	71	GP	E							
Lynn Cr	38.9011	95.5814	38.9682	95.6681	67	GP	E	X		X				
Mattoon Cr	39.0948	94.6698	39.1151	94.6722	1178	GP	E	O	X	X	X	X	X	X
Mill Cr	39.0426	94.7970	38.8641	94.7999	39	GP	E	X	X	X	X	X	X	X
Mission Cr, East	39.0582	94.8323	39.1150	94.8461	61	GP	E		X	X	X	X	X	X
Mission Cr, West	39.0649	94.8400	39.0976	94.8698	1164	GP	E							
Mooney Cr	39.4291	95.2362	39.3552	95.2118	1011	GP	E							
Mud Cr	38.9815	95.1637	39.1715	95.2372	20	GP	E	X		X	X			X
Muncie Cr	39.1030	94.7033	39.1249	94.7348	55	GP	E	O	X	X	X	X	X	X
Ninemile Cr	39.0070	95.0289	39.1026	95.1630	15	GP	E			X				
Ninemile Cr	39.1026	95.1630	39.1953	95.2177	17	GP	E			X				
Oakley Cr	39.0371	95.3625	38.9869	95.3626	56	GP	E							
Piper Cr	39.1401	94.9010	39.1297	94.8603	1154	GP	E							
Plum Cr	39.0952	95.2565	39.1643	95.2515	50	GP	E							
Prairie Cr	39.2786	95.1742	39.2108	95.2183	47	GP	E							
Rock Cr	38.8663	95.4311	38.7715	95.5314	35	GP	E		X	X	X	X	X	X
Rock Cr	39.2009	95.0431	39.2436	95.0268	902	GP	E							
Scatter Cr	39.2786	95.1742	39.2505	95.2499	13	GP	E							
Sixmile Cr	38.8896	95.7234	38.9714	95.8493	65	GP	E	X		X				
Spoon Cr	38.9200	94.9840	38.8079	95.0116	75	GP	E							
Stone House Cr	39.0335	95.3306	39.0937	95.3240	57	GP	E			X				
Stone House Cr, East	39.0937	95.3240	39.1535	95.3243	9057	GP	E			X				
Stone House Cr, West	39.0937	95.3240	39.1484	95.3352	830	GP	E							
Stranger Cr	38.9977	95.0269	39.0070	95.0289	5	GP	E	X	X	X	X	X	X	X
Stranger Cr	39.0070	95.0289	39.0962	95.0241	6	GP	E	X	X	X	X	X	X	X
Stranger Cr	39.0962	95.0241	39.2285	95.0735	7	GP	E		X	X	X	X	X	X
Stranger Cr	39.2813	95.1060	39.4587	95.1895	8	GP	E		X	X	X	X	X	X
Stranger Cr	39.4587	95.1895	39.5705	95.3750	9	GP	E		X	X	X	X	X	X
Tonganoxie Cr	39.0962	95.0241	39.1975	95.1905	14	GP	E			X				
Tooley Cr	39.0498	94.7769	39.0442	94.7757	379	GP	E		X	X	X	X	X	X
Turkey Cr	39.0771	94.6188	38.9679	94.7175	77	GP	E		X	X	X	X	X	X
Unnamed Stream	39.4281	95.2399	39.4312	95.3119	11	GP	E							
Unnamed Stream	39.1026	95.1630	39.1489	95.1441	16	GP	E							
Unnamed Stream	38.8801	94.9710	38.8037	94.9134	452	GP	E	O	X	X	X	X	X	X
Unnamed Stream	38.9275	95.7638	38.9795	95.7933	583	GP	E							
Unnamed Stream	38.9342	95.7694	38.9737	95.7599	584	GP	E							
Wakarusa R	38.9556	95.0829	38.9184	95.2919	24	GP	E	X	X	X	X	X	X	X
Wakarusa R	38.9184	95.2919	38.9355	95.3355	25	GP	E	X	X	X	X	X	X	X
Wakarusa R	38.8884	95.4830	38.8861	95.6290	30	GP	E	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER KANSAS (HUC 10270104)														
Wakarusa R	38.8861	95.6290	38.8955	95.9522	31	GP	E	X	X	X	X	X	X	X
Wakarusa R, Middle Br	38.8997	95.8524	38.9340	95.9191	64	GP	E		X	X	X	X	X	X
Wakarusa R, S Br	38.8927	95.8182	38.8872	96.0287	63	GP	E		X	X	X	X	X	X
Washington Cr	38.9184	95.2919	38.7953	95.4100	36	GP	E			X				
Wolf Cr	39.0488	94.8860	39.1706	94.8932	53	GP	E	X	X	X	X	X	X	X
Yankee Tank Cr	38.9185	95.2721	38.9663	95.3492	70	GP	E							
SUBBASIN: LOWER BIG BLUE (HUC 10270205)														
Ackerman Cr	39.7029	96.3648	39.8160	96.3470	49	GP	E							
Big Blue R	39.1860	96.5269	39.2471	96.5925	1	GP	E	X	X	X	X	X	X	X
Big Blue R	39.6202	96.5756	39.6978	96.6772	17	GP	E	X	X	X	X	X	X	X
Big Blue R	39.6978	96.6786	39.8292	96.6565	18	GP	E	X	X	X	X	X	X	X
Big Blue R	39.2471	96.5925	39.2567	96.5952	2	GP	E							
Big Blue R	39.8292	96.6565	39.8941	96.6622	20	GP	E	X	X	X	X	X	X	X
Big Blue R	39.8941	96.6622	39.9997	96.5966	21	GP	E	X	X	X	X	X	X	X
Big Blue R	39.4999	96.6570	39.6202	96.5756	7	GP	E	X	X	X	X	X	X	X
Black Vermillion R	39.6483	96.4790	39.6905	96.4437	10	GP	E	X	X	X	X	X	X	X
Black Vermillion R	39.6905	96.4437	39.6965	96.3820	11	GP	E	X	X	X	X	X	X	X
Black Vermillion R	39.6965	96.3820	39.7242	96.3291	13	GP	E	X	X	X	X	X	X	X
Black Vermillion R	39.7242	96.3291	39.6740	96.0649	14	GP	E	X	X	X	X	X	X	X
Black Vermillion R	39.5852	96.5690	39.6483	96.4790	8	GP	E	X	X	X	X	X	X	X
Black Vermillion R, Clear Fk	39.6483	96.4790	39.5168	96.3108	9	GP	S		X	X	X	X	X	X
Black Vermillion R, N Fk	39.7242	96.3291	39.9296	96.3437	15	GP	E		X	X	X	X	X	X
Black Vermillion R, S Fk	39.6965	96.3820	39.5544	96.3057	12	GP	E		X	X	X	X	X	X
Bluff Cr	39.5427	96.5448	39.5000	96.4020	573	GP	S							
Bommer Cr	39.9284	96.6223	39.9319	96.5631	40	GP	E							
Bucksnort Cr	39.4947	96.5254	39.4775	96.4489	566	GP	S							
Carter Cr	39.5509	97.0249	39.6238	97.0000	59	GP	E							
Cedar Cr	39.6715	96.4540	39.6422	96.3706	56	GP	E							
Corndodger Cr	39.6196	96.5343	39.7218	96.5487	52	GP	E							
De Shazer Cr	39.6459	96.4920	39.5724	96.4594	55	GP	E							
Deadman Cr	39.5040	96.9856	39.6083	96.9820	60	GP	E							
Deer Cr	39.9000	96.6522	39.9960	96.6697	36	GP	E							
Dog Walk Cr	39.7496	96.4556	39.7399	96.5271	53	GP	E							
Dutch Cr	39.7754	96.6847	39.8145	96.7359	44	GP	E		X					
Elm Cr	39.6756	96.6286	39.7776	96.5650	46	GP	E			X				
Elm Cr, North	39.9720	96.6024	39.9527	96.4600	41	GP	E							
Fancy Cr, N Fk	39.4916	96.8798	39.6163	96.9256	61	GP	E			X				
Fancy Cr, West	39.4670	96.7618	39.6250	97.0647	29	GP	E			X				
Game Fork	39.6202	96.5756	39.5907	96.6971	54	GP	E		X					
Hop Cr	39.8005	96.6785	39.8650	96.7772	43	GP	E							
Horseshoe Cr	39.8941	96.6622	40.0015	96.8779	26	GP	E	X		X				

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER BIG BLUE (HUC 10270205)														
Indian Cr	39.9275	96.7233	40.0015	96.7063	37	GP	E							
Jim Cr	39.6230	96.4430	39.6079	96.3567	57	GP	E							
Johnson Fork	39.6608	96.4713	39.7271	96.5356	51	GP	E							
Kearney Branch	39.6382	96.3230	39.6521	96.2477	58	GP	E							
Lily Cr	39.8240	96.6034	39.8725	96.5800	39	GP	E							
Little Indian Cr	39.9502	96.7668	40.0015	96.7485	35	GP	E							
Little Timber Cr	39.7001	96.4108	39.8155	96.3649	48	GP	E							
Meadow Cr	39.9439	96.7491	39.9995	96.7403	34	GP	E							
Mill Cr	39.2943	96.6961	39.3580	96.8431	31	GP	E	X	X	X				
Mission Cr	40.0012	96.5323	40.0012	96.5310	22	GP	E							
Murdock Cr	40.0010	96.4482	39.9745	96.4040	42	GP	E							
Otter Cr	39.4724	96.8347	39.3930	96.9279	67	GP	E		X	X				
Otter Cr, North	39.4663	96.7724	39.5837	96.8226	62	GP	E		X	X				
Perkins Cr	39.7596	96.4645	39.7644	96.5558	47	GP	E							
Phiel Cr	39.2471	96.5925	39.2412	96.6511	68	GP	E							
Raemer Cr	39.9024	96.6976	39.8772	96.7826	33	GP	E							
Robidoux Cr	39.6905	96.4437	39.9943	96.3565	16	GP	E			X				
Schell Cr	39.8194	96.6155	39.7839	96.5936	45	GP	E							
School Branch	39.4737	96.8162	39.5740	96.8485	63	GP	E							
Scotch Cr	39.9027	96.6330	39.9057	96.5670	38	GP	E							
Spring Cr	39.8292	96.6565	39.9299	96.4741	19	GP	E			X				
Spring Cr	39.5481	96.5881	39.4349	96.5300	65	GP	S		X	X				
Timber Cr	39.5370	96.6177	39.5852	96.6712	64	GP	E		X					
Weyer Cr	39.7722	96.2406	39.7440	96.1099	50	GP	E							
SUBBASIN: UPPER LITTLE BLUE (HUC 10270206)														
Dry Cr	40.0022	97.6921	39.9716	97.7149	41	GP	E							
SUBBASIN: LOWER LITTLE BLUE (HUC 10270207)														
Ash Cr	39.8081	97.0426	39.7458	97.1374	36	GP	E			X				
Beaver Cr	39.7923	96.8765	39.7154	96.9601	38	GP	E							
Bolling Cr	39.7445	96.8150	39.8063	96.8314	42	GP	E							
Bowman Cr	39.8675	97.2420	40.0000	97.3202	21	GP	E			X				
Buffalo Cr	39.8394	97.1384	39.7781	97.1893	32	GP	E							
Camp Cr	39.8112	97.0646	39.7604	97.1518	35	GP	E							
Camp Cr	39.6605	96.8145	39.7061	96.9522	44	GP	E							
Cedar Cr	39.8634	96.8865	39.8616	96.8164	40	GP	E							
Cherry Cr	39.8515	97.3485	39.9449	97.4448	25	GP	E			X				
Coon Cr	39.6953	96.7641	39.6987	97.0749	23	GP	E			X				
Fawn Cr	39.6867	96.7018	39.6062	96.7419	45	GP	E							
Gray Branch	39.8622	97.2277	39.9908	97.2472	27	GP	E							
Humphrey Branch	40.0021	97.4354	39.9756	97.4077	24	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

KANSAS/LOWER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER LITTLE BLUE (HUC 10270207)														
Iowa Cr	39.8594	97.2024	39.7972	97.2557	34	GP	E							
Jones Cr	39.8659	97.2172	39.9537	97.2296	29	GP	E							
Joy Cr	39.9432	96.9720	40.0017	97.1183	13	GP	E							
Lane Branch	39.8060	96.8925	39.8373	96.9722	39	GP	E							
Little Blue R	39.6978	96.6786	39.6953	96.7641	1	GP	E	X	X	X	X	X	X	X
Little Blue R	39.6953	96.7641	39.9226	96.9272	2	GP	E	X	X	X	X	X	X	X
Little Blue R	39.9226	96.9272	39.9432	96.9720	3	GP	E	X	X	X	X	X	X	X
Little Blue R	39.9432	96.9720	39.9995	97.0129	4	GP	E	X	X	X	X	X	X	X
Malone Cr	39.7768	96.8693	39.7271	96.9169	37	GP	E							
Melvin Cr	39.8480	97.1638	39.7889	97.1987	33	GP	E							
Mercer Cr	39.7538	96.8284	39.7224	96.8927	43	GP	E							
Mill Cr	39.9226	96.9272	39.8878	97.0066	14	GP	E	X		X				
Mill Cr	39.8878	97.0066	39.8480	97.1638	16	GP	E	X		X				
Mill Cr	39.8381	97.1340	39.8498	97.1765	18	GP	E	X		X				
Mill Cr	39.8498	97.1765	39.8675	97.2420	20	GP	E	X		X				
Mill Cr	39.8675	97.2420	39.9045	97.5636	22	GP	E	X		X				
Mill Cr, S Fk	39.8480	97.3321	39.8452	97.5237	31	GP	E							
Myer Cr	39.8566	97.2919	39.9872	97.3547	26	GP	E			X				
Riddle Cr	39.8381	97.1340	40.0017	97.1941	17	GP	E							
Rose Cr	40.0020	97.5087	39.9654	97.7097	12	GP	E							
Salt Cr	39.8498	97.1765	39.9913	97.2128	19	GP	E			X				
School Cr	39.9995	97.0129	40.0017	97.0292	49	GP	E							
Silver Cr	40.0018	97.2332	39.9924	97.2343	28	GP	E							
Spring Cr	39.8878	97.0066	39.9955	97.1314	15	GP	E			X				
Spring Cr	39.9095	97.1036	39.9626	97.1126	30	GP	E			X				
Walnut Cr	39.7191	96.7681	39.8644	96.7941	41	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

LOWER ARKANSAS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: RATTLESNAKE (HUC 11030009)														
Bear Cr	38.0516	98.8169	37.9796	98.8968	8	GP	E							
Little Wild Horse Cr	38.0444	98.8430	37.9509	98.9745	6	GP	E							
Rattlesnake Cr	38.2164	98.3565	38.0579	98.7441	1	GP	S	X	X	X	X	X	X	X
Rattlesnake Cr	38.0579	98.7441	37.7170	99.1863	3	GP	S	X	X	X	X	X	X	X
Rattlesnake Cr	37.7170	99.1863	37.4835	99.7728	4	GP	S	X	X	X	X	X	X	X
Rattlesnake Cr, E Fk	37.7170	99.1863	37.5244	99.3394	5	GP	E	O	X	X	X	X	X	X
Rattlesnake Cr, S Br	37.7080	99.2630	37.4943	99.4779	9	GP	E	O	X	X	X	X	X	X
Spring Cr	37.9721	98.8076	37.9208	98.9070	7	GP	E							
Wildhorse Cr	38.0579	98.7441	37.9520	99.0487	2	GP	E							
SUBBASIN: GAR-PEACE (HUC11030010)														
Arkansas R	37.6774	97.3427	38.0444	97.9641	1	GP	S	X	X	X	X	X	X	X
Arkansas R	38.0428	97.9427	38.0466	97.9665	3	GP	S	X	X	X	X	X	X	X
Arkansas R	38.0444	97.9641	38.1741	98.2287	4	GP	S	X	X	X	X	X	X	X
Arkansas R	38.1741	98.2287	38.2192	98.3556	5	GP	S	X	X	X	X	X	X	X
Gar Cr	37.8973	97.6888	37.8582	97.8294	8	GP	E							
Peace Cr	38.1741	98.2287	37.9668	98.6462	6	GP	S	X		X				
Salt Cr	38.0444	97.9641	38.0532	98.2765	7	GP	E	X		X				
SUBBASIN: COW (HUC 11030011)														
Blood Cr	38.4754	98.7013	38.5901	99.0413	15	EX	S							
Calf Cr	38.4420	98.4295	38.5897	98.4814	16	GP	E							
Cow Cr	38.0428	97.9427	38.3083	98.1936	1	GP	E	X	X	X	X	X	X	X
Cow Cr	38.3083	98.1936	38.4387	98.3572	3	GP	E	X	X	X	X	X	X	X
Cow Cr	38.4387	98.3572	38.4468	98.4809	5	GP	E	X	X	X	X	X	X	X
Cow Cr	38.4468	98.4809	38.6432	98.6527	6	GP	E	X	X	X	X	X	X	X
Deception Cr	38.4833	98.6786	38.6513	98.7860	13	GP	S							
Dry Cr	38.2429	98.0863	38.3742	98.0786	22	GP	E							
Jarvis Cr	38.2683	98.1155	38.3989	98.1193	19	GP	E							
Little Cheyenne Cr	38.4468	98.4809	38.4446	98.6338	7	EX	S				X			
Little Cow Cr	38.3083	98.1936	38.5473	98.2410	2	GP	E				X			
Lost Cr	38.4154	98.3300	38.6069	98.3024	17	GP	E							
Owl Cr	38.3097	98.1825	38.4266	98.1604	18	GP	E							
Plum Cr	38.4387	98.3572	38.6195	98.5063	4	GP	E				X			
Salt Cr	38.3130	98.2058	38.3937	98.1816	21	GP	E							
Spring Cr	38.3469	98.2940	38.3162	98.4175	20	GP	E							
SUBBASIN: LITTLE ARKANSAS (HUC 11030012)														
Beaver Cr	38.1139	97.3220	38.1440	97.2422	26	GP	E							
Black Kettle Cr	38.0085	97.5072	38.2628	97.4855	368	GP	E							
Bull Cr	38.3521	97.6530	38.4346	97.6748	24	GP	E	O	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

LOWER ARKANSAS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LITTLE ARKANSAS (HUC 11030012)														
Dry Cr	38.3402	97.9675	38.3494	98.0473	22	GP	E							
Emma Cr	37.9350	97.4408	37.9979	97.4457	6	GP	E			X				
Emma Cr	37.9979	97.4457	38.2744	97.3635	7	GP	E							
Emma Cr , West	37.9979	97.4457	38.3749	97.3997	8	GP	E							
Gooseberry Cr	37.9067	97.3519	37.9548	97.2977	17	GP	E							
Horse Cr	38.4156	98.0183	38.5221	98.0791	19	GP	E							
Jester Cr	37.8505	97.4017	38.0631	97.2754	2	GP	E							
Jester Cr, W Fk	37.9685	97.3153	38.0537	97.2821	18	GP	E							
Kisiwa Cr	37.9589	97.4708	38.0190	97.7870	15	GP	E							
Little Arkansas R	37.6911	97.3478	37.8505	97.4017	1	GP	E	X	X	X	X	X	X	X
Little Arkansas R	37.9589	97.4708	38.1230	97.6006	10	GP	E	X	X	X	X	X	X	X
Little Arkansas R	38.1230	97.6006	38.5296	98.1551	14	GP	E	X	X	X	X	X	X	X
Little Arkansas R	37.8505	97.4017	37.9180	97.4352	3	GP	E	X	X	X	X	X	X	X
Little Arkansas R	37.9180	97.4352	37.9350	97.4408	5	GP	E	X	X	X	X	X	X	X
Little Arkansas R	37.9350	97.4408	37.9589	97.4708	9	GP	E	X	X	X	X	X	X	X
Lone Tree Cr	38.2719	97.9196	38.4143	97.9076	20	GP	E							
Mud Cr	37.9804	97.3892	38.0788	97.3626	16	GP	E							
Running Turkey Cr	38.2745	97.6225	38.4169	97.4689	25	GP	E							
Salt Cr	38.3477	97.9736	38.4293	97.9582	21	GP	E							
Sand Cr	38.2579	97.9123	38.3176	98.0524	23	GP	E	X		X				
Sand Cr	37.9180	97.4352	38.2300	97.2795	4	GP	E	X		X				
Sun Cr	38.1230	97.6006	38.2467	97.6465	11	GP	E							
Sun Cr	38.2467	97.6465	38.4507	97.5753	13	GP	E	O	X	X	X	X	X	X
Turkey Cr	38.2467	97.6465	38.4498	97.5541	12	GP	E			X				
SUBBASIN: MIDDLE ARKANSAS-SLATE (HUC 11030013)														
Antelope Cr	37.2076	97.2664	37.3021	97.3186	25	GP	E							X
Arkansas R	37.0476	96.9882	37.1345	97.1439	1	GP	S	X	X	X	X	X	X	X
Arkansas R	37.3673	97.1867	37.3863	97.1862	18	GP	S	X	X	X	X	X	X	X
Arkansas R	37.1345	97.1439	37.3219	97.1661	2	GP	S	X	X	X	X	X	X	X
Arkansas R	37.3673	97.1867	37.6774	97.3427	3	GP	S	X	X	X	X	X	X	X
Arkansas R	37.6775	97.3418	37.6336	97.3049	9	GP	S	X	X	X	X	X	X	X
Badger Cr	37.1846	97.2333	37.1307	97.2811	31	GP	E							
Beaver Cr	37.2349	97.3825	37.3154	97.3359	29	GP	E							
Beaver Cr	37.1623	97.0967	37.2499	97.0683	33	GP	E							
Big Slough	37.6005	97.3896	37.7819	97.7312	11	GP	E			X				
Big Slough, S Fk	37.8320	97.5991	37.7696	97.7249	35	GP	E							
Bitter Cr	37.4144	97.2001	37.4779	97.1630	28	GP	E							
Chisholm Cr, East	37.7177	97.3224	37.7889	97.2428	7	GP	E	X	X	X	X	X	X	X
Chisholm Cr, Middle Fork	37.7523	97.3416	37.8347	97.2412	36	GP	E	X	X	X	X	X	X	X
Chisolm Cr	37.6336	97.3049	37.6399	97.3061	4	GP	R	O	O	O	O	O	O	O
Chisolm Cr	37.6399	97.3061	37.7177	97.3224	6	GP	R	O	O	O	O	O	O	O

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

LOWER ARKANSAS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: MIDDLE ARKANSAS-SLATE (HUC 11030013)														
Chisolm Cr	37.7177	97.3224	37.9077	97.2839	8	GP	E	X	X	X	X	X	X	X
Cowskin Cr	37.3673	97.1867	37.6005	97.3896	10	GP	E	X	X	X	X	X	X	X
Cowskin Cr	37.6005	97.3896	37.6126	97.4090	12	GP	E	X	X	X	X	X	X	X
Cowskin Cr	37.6126	97.4090	37.7229	97.4913	13	GP	E	X	X	X	X	X	X	X
Cowskin Cr	37.7229	97.4913	37.7385	97.6905	14	GP	E	X	X	X	X	X	X	X
Dog Cr	37.4172	97.2174	37.5304	97.2085	531	GP	E							
Dry Cr	37.7229	97.4913	37.6934	97.6250	15	GP	E							
Dry Cr	37.6126	97.4090	37.6606	97.5518	16	GP	E							
Gypsum Cr	37.6399	97.3061	37.7473	97.2311	5	GP	E	X		X	X	X	X	X
Hargis Cr	37.2343	97.3876	37.3352	97.3479	24	GP	E							
Lost Cr	37.2611	97.1597	37.2744	97.1827	23	GP	E							
Negro Cr	37.0813	97.0857	37.0411	97.1443	20	GP	E							
Oak Cr	37.2755	97.4343	37.3636	97.4129	26	GP	E							
Salt Cr	37.1105	97.1283	37.0894	97.2369	22	GP	E							
Slate Cr	37.1345	97.1439	37.4117	97.7485	17	GP	E	X		X				
Spring Cr	37.0843	97.0914	37.0689	97.1735	19	GP	S							
Spring Cr	37.1000	97.1032	37.1348	97.0456	21	GP	E							
Spring Cr	37.2968	97.4593	37.4014	97.4973	27	GP	E							
Spring Cr	37.2115	97.1497	37.3586	97.1018	34	GP	E							
Spring Cr	37.5100	97.2677	37.6146	97.1823	37	GP	E							
W V C Floodway	37.5515	97.2852	37.5765	97.3657	456	GP	E							
Winser Cr	37.1915	97.2297	37.2881	97.2702	32	GP	E							
SUBBASIN: NORTH FORK NINNESCAH (HUC 11030014)														
Crow Cr	37.8459	97.9204	37.9173	97.9251	11	GP	E							
Dooleyville Cr	37.9109	98.5218	37.9602	98.6360	8	GP	E							
Goose Cr	37.8296	98.1785	37.7127	98.3545	10	GP	E			X				
Ninnescah R. N Fk	37.5680	97.7050	37.7265	97.7934	1	GP	E		X	X	X	X	X	X
Ninnescah R. N Fk	37.8228	97.8986	37.8417	98.1476	5	GP	S		X	X	X	X	X	X
Ninnescah R. N Fk	37.8417	98.1476	37.8355	98.7482	6	GP	S		X	X	X	X	X	X
Red Rock Cr	37.8660	97.9859	37.9734	98.0967	12	GP	S			X				
Rock Cr	37.7031	97.7841	37.7833	97.7382	13	GP	E							
Silver Cr	37.8417	98.1476	37.7579	98.5905	7	GP	S			X				
Spring Cr	37.6160	97.7368	37.7576	97.7058	14	GP	E							
Unnamed Stream	37.7895	98.3547	37.7800	98.4336	289	GP	S	O						
Unnamed Stream	37.6498	97.7676	37.6745	97.8272	411	GP	S	O						
Unnamed Stream	37.9099	98.1832	37.9015	98.1872	999	GP	S	O						
Wolf Cr	37.8293	98.3216	37.8327	98.4089	9	GP	E							
SUBBASIN: SOUTH FORK NINNESCAH (HUC 11030015)														
Coon Cr	37.5539	97.8992	37.5331	97.9980	17	GP	E							
Coon Cr	37.6563	98.5303	37.6061	98.5802	9	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

LOWER ARKANSAS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: SOUTH FORK NINNESCAH (HUC 11030015)														
Hunter Cr	37.6409	98.0847	37.5549	98.1994	14	GP	E							
Mead Cr	37.6308	98.3254	37.5555	98.3725	10	GP	E							
Mod Cr	37.5707	97.7180	37.5406	97.8009	19	GP	E							
Natrona Cr	37.6572	98.6252	37.6905	98.7432	307	GP	S							
Negro Cr	37.6276	98.0454	37.5724	98.0770	13	GP	E							
Nester Cr	37.5954	97.8068	37.7030	97.8712	15	GP	S							
Ninnescah R, S Fk	37.5672	97.7034	37.5729	97.8328	1	GP	S	X	X	X	X	X	X	X
Ninnescah R, S Fk	37.5742	97.8287	37.6378	98.3436	3	GP	S	X	X	X	X	X	X	X
Ninnescah R, S Fk	37.6378	98.3436	37.6400	98.7676	4	GP	S	X	X	X	X	X	X	X
Ninnescah R, S Fk	37.6400	98.7676	37.5957	98.9287	6	GP	S	X	X	X	X	X	X	X
Ninnescah R, W Br of S Fk	37.6400	98.7676	37.6231	98.9513	5	GP	S		X	X	X	X	X	X
Painter Cr	37.6378	98.3436	37.5735	98.6528	7	GP	S			X				
Pat Cr	37.6278	98.3065	37.5553	98.3302	11	GP	S							
Petyt Cr	37.6281	98.2317	37.5609	98.2858	12	GP	E							
Sand Cr	37.5920	97.9497	37.5463	98.1016	18	GP	S							
Smoots Cr	37.5742	97.8287	37.7050	98.2353	2	GP	S	X	X	X	X	X	X	X
Spring Cr	37.6958	97.9796	37.7821	98.0000	8	GP	E							
Unnamed Stream	37.6345	98.1385	37.6527	98.1462	249	GP	S	O						
Unnamed Stream	37.6350	98.2414	37.6754	98.2499	253	GP	S	O						
Unnamed Stream	37.6524	98.2714	37.6940	98.2746	259	GP	S	O						
Unnamed Stream	37.6507	98.2785	37.6656	98.2867	261	GP	S	O						
Unnamed Stream	37.6375	98.3332	37.6738	98.3322	270	GP	S	O						
Unnamed Stream	37.6380	98.3423	37.6903	98.3602	271	GP	S	O						
Unnamed Stream	37.6499	98.3819	37.6482	98.3978	417	GP	S	O						
Unnamed Stream	37.6343	98.1922	37.6929	98.1951	514	GP	S	O						
Unnamed Stream	37.6343	98.1922	37.6596	98.2097	518	GP	S	O						
Unnamed Stream	37.6309	98.1571	37.6540	98.1670	520	GP	S	O						
Unnamed Stream	37.6014	97.8706	37.6947	97.8715	579	GP	S	O						
Wild Run Cr	37.6207	98.2001	37.5382	98.2219	16	GP	E							
SUBBASIN: NINNESCAH (HUC 11030016)														
Afton Cr	37.5965	97.6344	37.6555	97.5838	148	GP	E							
Clear Cr	37.6371	97.6759	37.6903	97.6645	161	GP	E							
Clearwater Cr	37.5487	97.6294	37.6015	97.6358	4	GP	S							
Clearwater Cr	37.6015	97.6358	37.7193	97.6583	7	GP	E							
Dry Cr	37.5130	97.4188	37.5874	97.4585	16	GP	E			X				
Elm Cr	37.4291	97.3824	37.4140	97.4735	10	GP	E							
Garvey Cr	37.4670	97.4287	37.4209	97.4574	11	GP	E							
Ninnescah R	37.3219	97.1661	37.4600	97.3816	1	GP	S	X	X	X	X	X	X	X
Ninnescah R	37.4600	97.3816	37.5487	97.6294	3	GP	S	X	X	X	X	X	X	X
Ninnescah R	37.5473	97.6311	37.5448	97.6912	8	GP	S	X	X	X	X	X	X	X
Polecat Cr	37.6245	97.6547	37.7266	97.6770	59	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

LOWER ARKANSAS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: NINNESCAH (HUC 11030016)														
Sand Cr	37.5448	97.6912	37.4999	97.9307	14	GP	S							
Silver Cr	37.4728	97.4700	37.4236	97.5311	12	GP	E							
Spring Cr	37.5094	97.5633	37.6154	97.5765	15	GP	E							
Spring Cr	37.4600	97.3816	37.5832	97.5263	2	GP	E							
Turtle Cr	37.4773	97.4933	37.4312	97.5284	13	GP	E							
SUBBASIN: KAW LAKE (HUC 11060001)														
Arkansas R	37.0286	96.9398	37.0223	96.9281	14	GP	S	X	X	X	X	X	X	X
Arkansas R	37.0286	96.9398	37.0476	96.9882	18	GP	S	X	X	X	X	X	X	X
Beaver Cr	36.9991	96.6865	37.1181	96.6332	9	EX	E	X	X	X	X	X	X	X
Blue Branch	37.2994	96.6883	37.3433	96.7187	30	GP	E							
Bullington Cr	37.2334	96.7080	37.2576	96.6133	28	GP	E							
Cedar Cr	37.3084	96.6796	37.4035	96.5336	32	GP	E							
Chilocco Cr	36.9990	97.0890	37.0492	97.1623	19	GP	E							
Crabb Cr	37.1332	96.7831	37.1867	96.6139	29	GP	E			X				
Ferguson Cr	37.4590	96.5721	37.4458	96.5185	38	GP	E							
Franklin Cr	37.4535	96.5803	37.5000	96.6058	35	GP	E							
Gardners Branch	37.3948	96.6341	37.3902	96.5592	39	GP	E							
Goose Cr	37.3906	96.6436	37.4648	96.6396	34	GP	E							
Grouse Cr	37.0223	96.9281	37.0613	96.8669	15	EX	S	X	X	X	X	X	X	X
Grouse Cr	37.0613	96.8669	37.5836	96.5343	16	EX	S	X	X	X	X	X	X	X
Little Beaver Cr	36.9991	96.8138	37.0732	96.7638	11	GP	S	O						
Myers Cr	36.9991	96.7696	37.0284	96.7442	24	GP	E							
Otter Cr	37.0225	96.8975	37.0508	96.8258	20	GP	E							
Pebble Cr	37.1844	96.8450	37.2333	96.7719	26	GP	E							
Plum Cr	37.2805	96.7803	37.3182	96.7312	33	GP	E			X				
Riley Cr	37.4643	96.5684	37.4652	96.5089	37	GP	E							
School Cr	37.2626	96.6926	37.2894	96.6327	31	GP	E							
Shellrock Cr	37.0097	96.8115	37.0700	96.7527	22	GP	E							
Silver Cr	37.0613	96.8669	37.3389	96.7644	17	GP	E			X				
Snake Cr	37.2213	96.8299	37.3068	96.8160	25	GP	E							
Spring Cr	36.9992	96.7124	37.0820	96.7218	21	GP	E							
Turkey Cr	37.2002	96.7141	37.2578	96.7512	27	GP	E							
Wagoner Cr	37.4738	96.5577	37.5239	96.4987	36	GP	E							
SUBBASIN: UPPER SALT FORK (HUC 11060002)														
Arkansas R, Salt Fk	37.1189	99.0378	37.1105	99.0524	10	GP	E	X	X	X	X	X	X	X
Arkansas R, Salt Fk	37.1105	99.0524	37.1172	99.0889	11	GP	E	X	X	X	X	X	X	X
Arkansas R, Salt Fk	37.1172	99.0889	37.0875	99.1359	13	GP	E	X	X	X	X	X	X	X
Arkansas R, Salt Fk	37.0875	99.1359	37.1589	99.4066	15	GP	E	X	X	X	X	X	X	X
Arkansas R, Salt Fk	36.9995	98.8343	37.0275	98.8558	4	GP	E	X	X	X	X	X	X	X
Arkansas R, Salt Fk	37.0275	98.8558	37.0906	98.9961	6	GP	E	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued).

LOWER ARKANSAS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER SALT FORK (HUC 11060002)														
Arkansas R, Salt Fk	37.0906	98.9961	37.1189	99.0378	8	GP	E	X	X	X	X	X	X	X
Ash Cr	37.1501	98.9879	37.1996	98.9298	20	GP	E							
Big Sandy Cr	37.0275	98.8558	37.2398	98.8767	5	GP	E							
Cave Cr	37.0651	98.9749	37.0178	99.0504	28	GP	E							
Cottonwood Cr	37.0941	99.2001	36.9999	99.2193	30	GP	E	O		X				
Deadman Cr	37.1293	98.8542	37.2370	98.9017	22	GP	E							
Dog Cr	37.1184	99.0759	37.1748	99.1064	29	GP	E							
Hackberry Cr	36.9995	98.8162	37.1633	98.7981	23	GP	E			X				
Indian Cr	37.1189	99.0378	37.2831	99.1592	9	GP	E			X				
Inman Cr	37.1856	99.0011	37.2711	98.9359	21	GP	E							
Mule Cr	37.0906	98.9961	37.4822	99.4192	7	GP	S	X	X	X	X	X	X	X
Mustang Cr	37.0875	99.1354	36.9994	99.1810	31	GP	E			X				
Nescatunga Cr	37.0875	99.1359	37.3139	99.2421	14	GP	S	X	X	X	X	X	X	X
Nescatunga Cr, E Br	37.1791	99.2114	37.3031	99.2136	27	GP	E							
Red Cr	37.1105	99.0524	36.9998	99.1086	16	GP	E							
Spring Cr	37.3192	99.1241	37.3887	99.1607	24	GP	E							
Unnamed Stream	37.1004	99.2964	37.2079	99.3027	503	GP	E	X	X	X	X	X	X	X
Wildcat Cr	37.1172	99.0889	37.2244	99.1341	12	GP	E							
Yellowstone Cr	36.9994	98.8498	36.9994	98.8513	17	GP	E							
SUBBASIN: MEDICINE LODGE (HUC 11060003)														
Amber Cr	37.3824	98.5937	37.4948	98.6427	12	GP	S			X				
Antelope Cr	37.2426	98.5561	37.3112	98.5093	22	GP	E							
Bear Cr	37.3567	98.8777	37.3047	98.9921	13	GP	S							
Bitter Cr	37.3119	98.7253	37.2408	98.7882	18	GP	E							
Cedar Cr	37.2815	98.6319	37.2010	98.7950	20	GP	E			X				
Cottonwood Cr	37.3577	98.8465	37.4269	98.8475	16	GP	E							
Crooked Cr	37.4145	98.6509	37.4978	98.6708	11	GP	E							
Driftwood Cr	36.9990	98.6589	37.1210	98.7620	905	GP	E							
Dry Cr	37.1367	98.6596	37.1912	98.7392	21	GP	E							
Elm Cr	37.2607	98.5876	37.4278	98.6846	3	GP	S	X	X	X	X	X	X	X
Elm Cr, N Br	37.4278	98.6846	37.5608	98.7840	4	GP	S		X	X	X	X	X	X
Elm Cr, S Br	37.4278	98.6846	37.5633	98.8921	5	GP	S		X	X	X	X	X	X
Elm Cr, South E Br	37.4280	98.7700	37.5409	98.8277	10	GP	S		X	X	X	X	X	X
Little Bear Cr	37.3142	98.7551	37.2203	98.8105	19	GP	E							
Little Mule Cr	36.9989	98.5230	37.1907	98.7664	9	GP	E							
Medicine Lodge R	36.9981	98.3636	37.2607	98.5876	2	GP	S	X	X	X	X	X	X	X
Medicine Lodge R	37.2607	98.5876	37.3703	98.9210	6	GP	S	X	X	X	X	X	X	X
Medicine Lodge R	37.3703	98.9210	37.5160	99.3323	8	GP	S	X	X	X	X	X	X	X
Medicine Lodge R, N Br	37.4483	99.1989	37.5348	99.2772	24	GP	E		X	X	X	X	X	X
Mulberry Cr	37.3693	98.8903	37.4975	98.8930	14	GP	S							
Otter Cr	37.4332	99.1185	37.3946	99.1607	25	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

LOWER ARKANSAS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: MEDICINE LODGE (HUC 11060003)														
Puckett Cr	37.3508	98.8370	37.3082	98.8693	15	GP	E							
Sand Cr	37.3273	98.7627	37.3994	98.7500	17	GP	E							
Soldier Cr	37.4361	99.0368	37.6083	99.0397	27	GP	S							
Stink Cr	36.9987	98.5014	37.0515	98.5280	28	GP	E							
Thompson Cr	37.4489	99.1093	37.5992	99.1787	26	EX	S	X	X	X	X	X	X	X
Turkey Cr	37.3703	98.9210	37.6035	98.9888	7	GP	S							
Unnamed Stream	37.2967	98.6436	37.3659	98.6358	370	GP	S	O						
Unnamed Stream	37.3408	98.7940	37.4010	98.7754	415	GP	S	O						
Unnamed Stream	37.4515	98.9202	37.4605	98.9146	452	GP	S	O						
Unnamed Stream	37.5114	99.1570	37.5157	99.1929	559	GP	S	O						
Wilson Slough	37.1668	98.5425	37.2329	98.5195	23	GP	E							
SUBBASIN: LOWER SALT FORK (HUC 11060004)														
Camp Cr	37.1349	98.2432	37.2655	98.2525	68	GP	E							
Cooper Cr	36.9981	98.0720	37.0654	98.0553	71	GP	E							
Crooked Cr	36.9986	97.9268	37.0412	97.9207	24	GP	E							
Little Sandy Cr	36.9979	98.2734	37.3681	98.4917	39	GP	E							
Little Sandy Cr, E Br	37.2388	98.4123	37.3749	98.5016	65	GP	E							
Osage Cr	36.9989	97.7966	37.0000	97.7973	17	GP	E							
Plum Cr	37.0625	98.2190	37.1435	98.1763	70	GP	E							
Pond Cr	36.9987	97.8675	37.0427	97.8928	18	GP	E							
Rush Cr	36.9980	98.1193	37.0104	98.1169	69	GP	E							
Salty Cr	36.9979	98.2964	37.1765	98.4462	40	GP	E							
Sandy Cr	36.9979	98.2093	37.3641	98.3323	37	GP	E			X				
Sandy Cr, West	37.1972	98.3182	37.3626	98.3785	67	GP	E			X				
Spring Cr	37.1649	98.3490	37.3065	98.3799	66	GP	E							
Unnamed Stream	36.9983	97.9804	37.0327	97.9873	25	GP	E							
SUBBASIN: CHIKASKIA (HUC 11060005)														
Allen Cr	37.4744	98.2785	37.5513	98.3599	40	GP	S							
Baehr Cr	37.0847	97.8644	37.2225	97.9041	22	GP	E							
Beaver Cr	37.2034	97.6294	37.3456	97.6159	28	GP	E							
Beaver Cr	37.1160	98.0551	37.1662	98.1727	46	GP	E							
Big Spring Cr	37.4175	97.9533	37.5178	97.9769	34	GP	E							
Bitter Cr	36.9990	97.2652	37.1269	97.2832	4	GP	E							
Bitter Cr, East	36.9988	97.2247	37.0687	97.1874	16	GP	E							
Blue Stem Cr	37.4454	98.0143	37.5327	98.0422	48	GP	E							
Bluff Cr	36.9986	97.5485	36.9986	97.5287	13	GP	E	X	X	X	X	X	X	X
Bluff Cr	36.9986	97.5600	37.3711	98.3263	15	GP	E	X	X	X	X	X	X	X
Chicken Cr	37.4041	98.4968	37.4765	98.5413	36	GP	E							
Chikaskia R	37.4444	98.1992	37.5167	98.5781	10	GP	S	X	X	X	X	X	X	X
Chikaskia R	36.9987	97.4649	37.2509	97.7830	8	EX	S	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

LOWER ARKANSAS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: CHIKASKIA (HUC 11060005)														
Chikaskia R	37.2509	97.7830	37.4444	98.1992	9	EX	S	X	X	X	X	X	X	X
Chikaskia R, N Fk	37.4816	98.3635	37.5548	98.4909	37	GP	S	X	X	X	X	X	X	X
Copper Cr	37.4436	98.0285	37.4983	98.0649	42	GP	E							
Dry Cr	36.9987	97.3074	37.0118	97.3017	17	GP	E							
Duck Cr	37.4266	97.9708	37.5304	98.0159	32	GP	S							
Fall Cr	36.9986	97.5590	37.1991	97.8189	14	GP	E			X				
Fall Cr, E Br	37.0884	97.6851	37.1776	97.6989	27	GP	E							
Goose Cr	37.4053	98.2999	37.4357	98.3488	38	GP	E							
Kemp Cr	37.4636	98.2631	37.5125	98.2653	49	GP	E							
Long Cr	37.1775	97.5631	37.2590	97.5396	529	GP	E		X	X	X		X	X
Meridian Cr	37.0043	97.3805	37.1604	97.3376	20	GP	E							
Prairie Cr	37.1273	97.5880	37.1483	97.5658	512	GP	E		X	X	X		X	X
Prairie Cr, East	37.1519	97.5683	37.2993	97.5278	516	GP	E		X	X	X		X	X
Prairie Cr, West	37.1519	97.5683	37.3135	97.5604	527	GP	E		X	X	X		X	X
Red Cr	37.4439	98.0736	37.5394	98.1820	43	GP	E							
Rock Cr	37.1061	97.9732	37.2443	97.9884	23	GP	E							
Rodgers Branch	37.0847	97.5467	37.1743	97.5229	26	GP	E							
Rose Bud Cr	37.4502	98.0824	37.5372	98.0882	44	GP	E							
Rush Cr	37.1736	98.0958	37.3729	98.1263	45	GP	E							
Sand Cr	37.4444	98.1992	37.5780	98.7943	11	GP	S			X	X			X
Sand Cr, East	37.2509	97.7830	37.3789	98.1578	12	GP	E			X	X			X
Sandy Cr	37.3384	97.8587	37.4503	97.8475	30	GP	E			X	X			X
Shoo Fly Cr, East	37.0930	97.4417	37.1681	97.3998	19	GP	E							
Shore Cr	37.2422	97.6783	37.3659	97.6652	35	GP	E			X	X			X
Silver Cr	37.2534	97.6911	37.3717	97.6980	29	GP	E			X	X			X
Skunk Cr	37.3933	98.3728	37.4525	98.4353	39	GP	E							
Spring Branch	37.0728	97.8341	37.1958	97.8538	21	GP	E							
Spring Cr	37.0299	97.3955	37.1597	97.3661	18	GP	E	X	X	X	X	X	X	X
Spring Cr	37.0767	97.5345	37.1955	97.5069	25	GP	E	X	X	X	X	X	X	X
Spring Cr	37.2809	97.8089	37.3930	98.0050	31	GP	E	X	X	X	X	X	X	X
Spring Cr	37.1101	98.0343	37.3616	98.0751	47	GP	E	X	X	X	X	X	X	X
Spring Cr	36.9989	97.3794	37.2356	97.4547	6	GP	E	X	X	X	X	X	X	X
Wild Horse Cr	37.4390	98.1642	37.5501	98.1952	41	GP	E							
Wildcat Cr	37.0950	97.9500	37.0290	98.0241	24	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

MARAIS DES CYGNES RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER MARAIS DES CYGNES (HUC 10290101)														
Appanoose Cr	38.6176	95.3312	38.7677	95.4890	16	GP	S			X				
Appanoose Cr, East	38.6823	95.4326	38.7486	95.4424	89	GP	E							
Batch Cr	38.7981	95.9681	38.8673	96.0413	86	GP	E							
Blue Cr	38.6000	95.3501	38.6348	95.3996	81	GP	E							
Bradshaw Cr	38.2128	95.2530	38.1474	95.2755	75	GP	E							
Cedar Cr	38.3341	95.2579	38.1612	95.4713	66	GP	E		X	X				
Cherry Cr	38.2407	95.4714	38.2209	95.5272	74	GP	E							
Chicken Cr	38.6916	96.0453	38.8086	96.0938	70	GP	E							
Chicken Cr	38.5152	95.6722	38.5727	95.6809	93	GP	E							
Coal Cr	38.5864	95.4015	38.4863	95.4442	48	GP	E			X				
Dragoon Cr	38.6870	95.7193	38.8597	96.1187	27	GP	E	X	X	X	X	X	X	X
Dry Cr	38.3580	95.1963	38.4223	95.2058	57	GP	E							
Dry Cr	38.5630	95.5155	38.5751	95.6277	95	GP	E							
Duck Cr	38.5362	95.9520	38.6389	96.1600	41	GP	E		X	X				
Eightmile Cr	38.6206	95.2857	38.7988	95.3909	13	GP	E			X				
Eightmile Cr, W Fk	38.7312	95.3555	38.7743	95.4073	88	GP	E							
Elm Cr	38.5682	95.9742	38.8524	96.1362	39	GP	S	X	X	X	X	X	X	X
Frog Cr	38.5208	95.6101	38.3616	95.8087	42	GP	S							
Hard Fish Cr	38.5876	95.4665	38.5179	95.4725	47	GP	E							
Hickory Cr	38.5789	95.1111	38.6795	95.0307	8	GP	E							
Hill Cr	38.6036	96.0503	38.6901	96.1957	71	GP	E			X				
Hundred & Ten Mile Cr	38.5978	95.5088	38.6473	95.5636	20	GP	E	X	X	X	X	X	X	X
Hundred And Forty Two Mile Cr	38.5682	95.9742	38.7745	96.1968	40	GP	E	X	X	X	X	X	X	X
Hundred And Ten Mile Cr	38.7086	95.6379	38.8356	95.8599	25	GP	E	X	X	X	X	X	X	X
Iantha Cr	38.3396	95.3351	38.4212	95.5055	62	GP	E			X				
Jersey Cr	38.6004	95.7363	38.6489	95.7862	76	GP	E							
Kenoma Cr	38.3198	95.3828	38.4068	95.5241	64	GP	E			X				
Little Rock Cr	38.4483	95.5862	38.3974	95.5456	73	GP	E							
Locust Cr	38.7675	96.1157	38.7922	96.1995	69	GP	S							
Long Cr	38.4634	95.6854	38.3380	95.7112	1531	GP	S			X				
Marais Des Cygnes R	38.4892	94.9196	38.5042	94.9486	1	GP	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5652	95.1293	38.5903	95.1587	10	GP	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5903	95.1587	38.6206	95.2857	12	GP	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.6206	95.2857	38.5967	95.3228	14	GP	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5967	95.3228	38.6176	95.3312	15	GP	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.6176	95.3312	38.5864	95.4015	17	GP	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5864	95.4015	38.5876	95.4665	18	GP	E	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5876	95.4665	38.5978	95.5088	19	GP	E	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5978	95.5088	38.5949	95.5135	28	GP	E	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5042	94.9486	38.5772	95.0920	3	GP	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5949	95.5135	38.5422	95.5404	30	GP	E	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5422	95.5404	38.5254	95.5786	31	GP	E	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5254	95.5786	38.5208	95.6101	32	GP	E	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

MARAIS DES CYGNES RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER MARAIS DES CYGNES (HUC 10290101)														
Marais Des Cygnes R	38.5208	95.6101	38.5101	95.7086	33	GP	E	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5143	95.9229	38.5362	95.9520	37	GP	E	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5362	95.9520	38.5682	95.9742	38	GP	E	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5772	95.0920	38.5789	95.1111	7	GP	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.5789	95.1111	38.5652	95.1293	9	GP	S	X	X	X	X	X	X	X
Middle Cr	38.5652	95.1293	38.4837	95.4356	50	GP	E			X				
Mill Cr	38.4823	95.4902	38.4829	95.4565	1589	GP	E	O	X	X	X	X	X	X
Mosquito Cr	38.4528	95.0714	38.4829	95.1402	52	GP	E							
Mud Cr	38.5967	95.3228	38.5374	95.3917	49	GP	E							
Mud Cr	38.6968	95.7768	38.6470	95.8334	78	GP	E							
Mud Cr	38.5140	95.9240	38.4880	96.0000	91	GP	E		X					
Mute Cr	38.6047	95.8048	38.5895	95.9099	92	GP	E							
Plum Cr	38.5042	94.9486	38.5940	94.9894	2	GP	E							
Plum Cr	38.7225	95.8583	38.7000	95.9367	79	GP	E							
Popcorn Cr	38.6946	95.7275	38.7665	95.7264	87	GP	E							
Pottawatomie Cr	38.4968	94.9267	38.4528	95.0714	51	GP	S	X	X	X	X	X	X	X
Pottawatomie Cr	38.4528	95.0714	38.4262	95.1075	53	GP	S	X	X	X	X	X	X	X
Pottawatomie Cr	38.4262	95.1075	38.3776	95.1371	55	GP	S	X	X	X	X	X	X	X
Pottawatomie Cr	38.3776	95.1371	38.3580	95.1963	56	GP	S	X	X	X	X	X	X	X
Pottawatomie Cr	38.3580	95.1963	38.3341	95.2579	58	GP	S	X	X	X	X	X	X	X
Pottawatomie Cr	38.3341	95.2579	38.3442	95.3013	59	GP	S	X	X	X	X	X	X	X
Pottawatomie Cr	38.3442	95.3013	38.3396	95.3351	61	GP	S	X	X	X	X	X	X	X
Pottawatomie Cr	38.3396	95.3351	38.3198	95.3828	63	GP	S	X	X	X	X	X	X	X
Pottawatomie Cr, N Fk	38.3198	95.3828	38.3469	95.5760	65	GP	E		X	X	X	X	X	X
Pottawatomie Cr, S Fk	38.3776	95.1371	38.1324	95.1450	67	GP	S		X	X	X	X	X	X
Rock Cr	38.5254	95.5786	38.3541	95.5658	43	GP	E			X				
Rock Cr	38.5998	95.2341	38.5335	95.3393	97	GP	E			X				
Sac Branch, S Fk	38.4262	95.1075	38.4351	95.2026	54	GP	E							
Sac Cr	38.3442	95.3013	38.4709	95.4394	60	GP	E			X				
Salt Cr	38.5949	95.5135	38.7273	95.9943	29	GP	E			X				
Sand Cr	38.6468	95.3017	38.6946	95.2911	82	GP	E							
Smith Cr	38.7063	95.8075	38.6901	95.9198	77	GP	E							
Soldier Cr	38.7420	95.8737	38.7766	96.0424	1083	GP	E							
Spring Cr	38.6897	95.3376	38.7059	95.3937	84	GP	E							
Switzler Cr	38.7102	95.7875	38.8367	95.9247	80	GP	E			X				
Tauy Cr	38.5903	95.1587	38.8300	95.2714	11	GP	S			X				
Tauy Cr, E Fk	38.6682	95.2260	38.8023	95.1832	85	GP	E	O	X	X	X	X	X	X
Tequa Cr	38.5422	95.5404	38.4872	95.5183	44	GP	E							
Tequa Cr, E Br	38.4872	95.5183	38.4785	95.4463	46	GP	E	O	X	X	X	X	X	X
Tequa Cr, S Br	38.4872	95.5183	38.4199	95.5143	45	GP	E							
Thomas Cr	38.2668	95.4020	38.1803	95.5125	72	GP	E		X					
Turkey Cr	38.5772	95.0920	38.5942	95.0846	4	GP	E							
Turkey Cr	38.5942	95.0846	38.5960	95.0124	6	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

MARAIS DES CYGNES RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER MARAIS DES CYGNES (HUC 10290101)														
Unnamed Stream	38.8216	96.0353	38.8809	96.1018	1072	GP	E	X	X	X	X	X	X	X
Unnamed Stream	38.5942	95.0846	38.5911	95.0249	5	GP	E							
Walnut Cr	38.6273	95.1941	38.7572	95.1384	90	GP	E			X				
Willow Cr	38.5066	95.5920	38.4296	95.6279	94	GP	E							
Wilson Cr	38.6198	95.2769	38.6853	95.2658	83	GP	E							
Wolf Cr	38.5235	95.6212	38.5792	95.6541	96	GP	E							
SUBBASIN: LOWER MARAIS DES CYGNES (HUC 10290102)														
Big Sugar Cr	38.2355	94.6835	38.2407	94.7425	31	EX	S	X	X	X	X	X	X	X
Big Sugar Cr	38.2407	94.7425	38.0871	95.0903	32	GP	E	X	X	X	X	X	X	X
Buck Cr	38.1388	94.8879	38.0946	94.9296	44	GP	E							
Bull Cr	38.5484	94.8594	38.6332	94.8754	24	GP	E	O	X	X	X	X	X	X
Bull Cr	38.7432	94.9662	38.8245	94.9822	26	GP	E							
Davis Cr	38.2483	94.8773	38.3195	94.9466	38	GP	E							
Dorsey Cr	38.5645	94.8459	38.6298	94.8154	22	GP	E		X					
Elm Branch	38.7063	94.8004	38.6925	94.7446	48	GP	E							
Elm Branch	38.4748	94.8122	38.5360	94.7717	53	GP	E							
Elm Cr	38.3590	94.8275	38.3398	94.9569	40	GP	S							
Hushpuckney Cr	38.4043	94.8671	38.4373	94.9339	37	GP	E							
Jake Branch	38.5016	94.7132	38.5513	94.7098	54	GP	E							
Jordan Branch	38.4758	94.9108	38.4475	94.9164	36	GP	E							
Little Bull Cr	38.7373	94.8649	38.8253	94.8945	51	GP	E		X	X	X	X	X	X
Little Sugar Cr	38.2407	94.7425	38.1120	95.0110	33	GP	E			X				
Little Sugar Cr. N Fk	38.1394	94.9145	38.0784	94.9639	43	GP	E							
Marais Des Cygnes R	38.2777	94.7194	38.2788	94.7213	11	EX	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.2788	94.7213	38.3665	94.8102	15	EX	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.3665	94.8102	38.4758	94.9108	16	EX	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.4758	94.9108	38.4892	94.9196	29	EX	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.2186	94.6122	38.2355	94.6835	4	EX	S	X	X	X	X	X	X	X
Marais Des Cygnes R	38.2355	94.6835	38.2777	94.7194	5	EX	S	X	X	X	X	X	X	X
Martin Cr	38.7639	94.9810	38.7704	95.0636	99	GP	E							
Middle Cr	38.2788	94.7213	38.4889	94.7459	12	EX	S	X	X	X	X	X	X	X
Middle Cr	38.4889	94.7459	38.5238	94.6263	13	GP	E			X				
Middle Cr	38.3665	94.8102	38.3436	95.0945	30	GP	S							
Mine Cr	38.2044	94.6119	38.1160	94.8035	1244	GP	E							
Mound Cr	38.3926	94.9582	38.3890	95.0525	35	GP	E							
Muddy Cr	38.2234	94.6691	38.1782	94.7482	46	EX	S	X	X	X	X	X	X	X
Richland Cr	38.2513	94.8144	38.3148	94.8659	41	GP	S							
Rock Cr	38.7001	94.9971	38.7668	95.1068	27	GP	E		X					
Smith Branch	38.7017	94.9390	38.7341	94.9176	47	GP	E		X					
Spring Cr	38.7265	94.8698	38.7777	94.8165	50	GP	E		X	X	X	X	X	X
Sugar Cr	38.2045	94.9977	38.2447	95.1679	42	GP	E			X				

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued).

MARAIS DES CYGNES RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER MARAIS DES CYGNES (HUC 10290102)														
Sugar Cr, North	38.4102	94.6566	38.4643	94.6126	10	GP	E	X	X	X	X	X	X	X
Sugar Cr, North	38.2390	94.9207	38.3152	95.0727	39	GP	E	X	X	X	X	X	X	X
Sugar Cr, North	38.2777	94.7194	38.3380	94.6473	6	EX	S	X	X	X	X	X	X	X
Sweetwater Cr	38.6940	94.8193	38.7679	94.8012	49	GP	E	X	X	X	X	X	X	X
Tenmile Cr	38.6332	94.8754	38.7473	94.7156	25	GP	E	X	X	X	X	X	X	X
Turkey Cr	38.2623	94.8263	38.2981	94.8277	1029	GP	E							
Turkey Cr	38.2352	94.8471	38.1872	94.9106	45	GP	E							
Unnamed Stream	38.6522	94.7326	38.6836	94.7491	754	GP	S	X	X	X	X	X	O	O
Walnut Cr	38.4889	94.7459	38.5384	94.7371	14	GP	E							
Walnut Cr	38.1192	94.6135	38.1127	94.6673	34	GP	E							
Walnut Cr	38.5774	94.8928	38.6165	94.9859	52	GP	E							
Wea Cr, North	38.6028	94.7841	38.7447	94.6753	21	GP	E			X				
Wea Cr, South	38.5484	94.8594	38.5645	94.8459	18	GP	E			X				
Wea Cr, South	38.5645	94.8459	38.6030	94.7840	19	GP	E			X				
Wea Cr, South	38.6030	94.7840	38.5909	94.6323	20	GP	E			X				
SUBBASIN: LITTLE OSAGE (HUC 10290103)														
Clever Cr	38.0206	94.7551	37.9503	94.7923	7	GP	E							
Elk Cr	38.0210	94.7714	38.1038	94.8572	11	GP	E			X				
Fish Cr	38.0096	94.7043	37.9460	94.7715	8	GP	E							
Indian Cr	38.0018	94.6409	38.1093	94.6775	12	GP	E							
Irish Cr	38.0185	95.0041	38.0861	94.9824	202	GP	E							
Laberdie Cr, East	38.0196	94.7222	38.0958	94.7064	13	GP	E							
Limestone Cr	37.9876	94.9568	37.9265	95.1000	5	GP	E			X				
Little Osage R	37.9918	94.6140	38.0257	95.0892	3	GP	S	X	X	X	X	X	X	X
Little Osage R, Middle Fk	38.0257	95.0892	38.0461	95.2145	36	GP	S	X	X	X	X	X	X	X
Little Osage R, N Fk	38.0257	95.0892	38.1142	95.1489	220	GP	E							
Little Osage R, S Fk	38.0061	95.0770	37.9511	95.2057	249	GP	E							
Lost Cr	38.0173	94.7978	38.0674	94.9383	10	GP	E							
Owl Cr	38.0187	94.9903	38.0791	94.9802	9	GP	E							
Reagan Branch	37.9840	94.9351	37.9378	94.9481	6	GP	E							
SUBBASIN: MARMATON (HUC 10290104)														
Bone Cr	37.6695	94.7120	37.5976	94.8023	9019	GP	E							
Buck Run	37.6956	94.6176	37.7358	94.7170	46	GP	E							
Bunion Cr	37.7872	94.8998	37.7208	94.8785	39	GP	E							
Cedar Cr	37.8172	94.7919	37.8721	94.8401	41	GP	E		X					
Cox Cr	37.6849	94.6217	37.5580	94.6609	324	GP	E							
Drywood Cr, Moores Branch	37.7829	94.6171	37.7893	94.7029	17	GP	E							
Drywood Cr, W Fk	37.6857	94.6177	37.6695	94.7120	19	GP	E							
Drywood Cr, W Fk	37.6706	94.7153	37.6183	94.8310	323	GP	E							
• Elm Cr	37.7810	94.8277	37.7290	94.8674	15	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

MARAIS DES CYGNES RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: MARMATON (HUC 10290104)														
Hinton Cr	37.7702	94.9594	37.7360	95.0584	38	GP	E							
Lath Branch	37.8522	94.6554	37.8172	94.6755	42	GP	E							
Little Mill Cr	37.9081	94.8131	37.9586	94.8247	34	GP	E							
Marmaton R	37.8107	94.7806	37.8027	94.8152	11	GP	S	X	X	X	X	X	X	X
Marmaton R	37.8027	94.8152	37.9334	95.1627	12	GP	S	X	X	X	X	X	X	X
Marmaton R	37.8512	94.6161	37.8522	94.6554	5	GP	S	X	X	X	X	X	X	X
Marmaton R	37.8486	94.7031	37.8486	94.7031	7	GP	S	X	X	X	X	X	X	X
Marmaton R	37.8284	94.7271	37.8107	94.7806	8	GP	S	X	X	X	X	X	X	X
Mill Cr	37.8486	94.7031	37.9302	94.9240	6	GP	E			X				
Owl Cr	37.7456	94.9543	37.6941	94.9241	45	GP	E							
Paint Cr	37.8027	94.8152	37.7917	94.8241	13	GP	E			X				
Paint Cr	37.7917	94.8241	37.7037	94.9656	14	GP	E			X				
Pawnee Cr	37.7810	94.8277	37.6393	94.8900	313	GP	E							
Prong Cr	37.7327	94.9652	37.7169	94.9893	44	GP	E							
Robinson Branch	37.8251	94.8665	37.8738	94.8747	40	GP	E							
Shiloh Cr	37.8907	94.6152	37.9492	94.6726	36	GP	E							
Sweet Branch	37.8743	95.1078	37.9219	95.1055	30	GP	E							
Tennyson Cr	37.8287	95.0017	37.8828	95.0267	31	GP	E							
Turkey Cr	37.8464	94.9496	37.9185	94.9955	33	GP	E							
Walnut Cr	37.8359	94.9019	37.8998	94.9112	32	GP	E							
Walnut Cr	37.6839	94.6960	37.7217	94.7440	47	GP	E							
Wolfpen Cr	37.8035	95.0618	37.7432	95.0819	37	GP	E							
Wolverine Cr	37.8653	94.6844	37.9330	94.7185	35	GP	E							
SUBBASIN: SOUTH GRAND (HUC 10290108)														
Harless Cr	38.6015	94.6115	38.5934	94.6232	67	GP	E							
Pony Cr	38.6433	94.6107	38.6751	94.6370	48	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

MISSOURI RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: TARKIO-WOLF (HUC 10240005)														
Cedar Cr	39.9476	95.2505	39.8329	95.2847	51	GP	E	X						
Cold Ryan Branch	39.7862	95.2244	39.7447	95.1940	70	GP	E							
Coon Cr	39.8373	95.1689	39.7759	95.1223	71	GP	E							
Halling Cr	39.7757	95.2890	39.6992	95.3225	68	GP	E							
Mill Cr	39.9454	95.2458	39.8617	95.2887	52	GP	E							
Mission Cr	39.9020	95.2003	39.8426	95.2828	339	GP	E	O	X	X	X	X	X	X
Missouri R	39.8985	95.0000	39.8989	95.1909	1	GP	S	X	X	X	X	X	X	X
Missouri R	39.9905	95.3089	40.0000	95.3093	19	GP	S	X	X	X	X	X	X	X
Missouri R	39.8989	95.1909	39.9454	95.2458	2	GP	S	X	X	X	X	X	X	X
Missouri R	39.9454	95.2458	39.9476	95.2505	20	GP	S	X	X	X	X	X	X	X
Missouri R	39.9476	95.2505	39.9905	95.3089	21	GP	S	X	X	X	X	X	X	X
Mosquito Cr	39.8620	95.0901	39.7692	95.1010	73	GP	E	X						
Rittenhouse Branch	39.8029	95.2124	39.8251	95.2658	69	GP	E							
Spring Cr	39.9130	95.3024	39.9243	95.3367	65	GP	E							
Striker Branch	39.8591	95.1844	39.8429	95.2429	72	GP	E							
Unnamed Stream	39.8080	95.3827	39.8445	95.3547	55	GP	E		X	X		X	X	
Wolf R	39.8989	95.1909	39.8051	95.3785	53	GP	E	X	X	X	X	X	X	X
Wolf R	39.8051	95.3785	39.8080	95.3827	54	GP	E	X	X	X	X	X	X	X
Wolf R	39.8080	95.3827	39.7940	95.6407	56	GP	E	X	X	X	X	X	X	X
Wolf R, Middle Fk	39.8118	95.4446	39.7416	95.5489	67	GP	E		X	X	X	X	X	X
Wolf R, N Fk	39.8053	95.4809	39.8371	95.5598	66	GP	E		X	X	X	X	X	X
Wolf R, S Fk	39.8051	95.3785	39.6500	95.3410	57	GP	E		X	X	X	X	X	X
SUBBASIN: SOUTH FORK BIG NEMAHA (HUC 10240007)														
Big Nemaha R, S Fk	39.9531	96.0353	39.9189	96.0323	15	GP	S	X	X	X	X	X	X	X
Big Nemaha R, S Fk	39.9189	96.0323	39.6622	96.0288	16	GP	S	X	X	X	X	X	X	X
Big Nemaha R, S Fk	40.0008	96.0374	39.9531	96.0353	3	GP	S	X	X	X	X	X	X	X
Burger Cr	39.9427	96.0756	39.9874	96.1111	24	GP	E							
Clear Cr	39.9612	96.1280	39.9546	96.3388	132	GP	E							
Deer Cr	39.9189	96.0323	39.9326	95.8480	18	GP	E							
Fisher Cr	39.8228	96.0602	39.7867	96.1179	28	GP	E							
Harris Cr	39.9102	96.0315	39.8717	95.8965	166	GP	E							
Honey Cr	40.0004	95.8341	39.9786	95.8642	26	GP	E	X	X	X	X	X	X	X
Illinois Cr	39.7823	96.0493	39.6844	96.0491	30	GP	E			X				
Manley Cr	39.9652	96.2159	39.9836	96.3411	14	GP	S	X	X	X	X	X	X	X
Rattlesnake Cr	40.0006	95.8555	39.9806	95.8718	27	GP	E				X			X
Rock Cr	40.0003	95.7968	39.9437	95.8620	20	GP	E							
Tennessee Cr	39.8066	96.0602	39.7309	95.9404	29	GP	E							
Turkey Cr	39.9531	96.0353	39.9757	96.1461	4	GP	E			X				
Turkey Cr	39.9757	96.1461	40.0008	96.1465	5	GP	E			X				
Unnamed Stream	40.0002	95.9712	39.9632	95.9805	212	GP	E							
Wildcat Cr	40.0009	96.2234	40.0008	96.2419	22	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

MISSOURI RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: SOUTH FORK BIG NEMAHA (HUC 10240007)														
Wildcat Cr	39.8782	96.0432	39.8335	96.1557	23	GP	E							
Wolf Cr	39.9757	96.1461	39.9652	96.2159	12	GP	E	X	X	X	X	X	X	X
Wolf Cr	39.9652	96.2159	40.0009	96.3007	13	GP	E	X	X	X	X	X	X	X
Wolf Pen Cr	39.9213	95.9885	39.9554	95.9130	25	GP	E							
SUBBASIN: BIG NEMAHA (HUC 10240008)														
Noharts Cr	40.0000	95.4629	39.9154	95.4650	42	GP	E							
Pedee Cr	39.9754	95.6834	40.0006	95.7284	41	GP	E							
Pony Cr	40.0003	95.6274	39.9131	95.8005	38	GP	E			X				
Roys Cr	40.0000	95.3986	39.9006	95.4903	40	GP	E			X				
Terrapin Cr	39.9047	95.5884	39.9191	95.7361	308	GP	E	O		X				
Walnut Cr	40.0001	95.5648	39.8145	95.6908	39	GP	E	X		X				
SUBBASIN: INDEPENDENCE-SUGAR (HUC 10240011)														
Brush Cr	39.6681	95.0272	39.7543	95.0662	26	GP	E							
Corral Cr	39.3346	94.9099	39.3398	94.9438	175	GP	E	O	O	O	X	O	O	X
Deer Cr	39.6211	95.0985	39.5693	95.2456	32	GP	E							
Fivemile Cr	39.3013	94.9022	39.2979	94.9685	35	GP	E							
Independence Cr	39.5798	95.1016	39.6361	95.1051	20	GP	E	X	X	X	X	X	X	X
Independence Cr	39.6361	95.1051	39.6709	95.3341	22	GP	E	X	X	X	X	X	X	X
Independence Cr. N Br	39.6691	95.2020	39.6901	95.2889	29	GP	E							
Island Cr	39.2056	94.8138	39.1792	94.8948	37	GP	E	X	X	X	X	X	X	X
Jersey Cr	39.1208	94.6077	39.1219	94.6706	38	GP	E	X	X	X	X	X	X	X
Jordan Cr	39.6593	95.1877	39.7368	95.1511	30	GP	E							
Missouri R	39.1160	94.6097	39.3013	94.9022	1	GP	S	X	X	X	X	X	X	X
Missouri R	39.5129	95.0788	39.5798	95.1016	11	GP	S	X	X	X	X	X	X	X
Missouri R	39.5798	95.1016	39.7325	94.9710	13	GP	S	X	X	X	X	X	X	X
Missouri R	39.7325	94.9710	39.8287	94.8826	15	GP	S	X	X	X	X	X	X	X
Missouri R	39.8287	94.8826	39.8996	94.9693	19	GP	S	X	X	X	X	X	X	X
Missouri R	39.3013	94.9022	39.3914	94.8894	2	GP	S	X	X	X	X	X	X	X
Missouri R	39.3914	94.8894	39.4141	94.9597	4	GP	S	X	X	X	X	X	X	X
Missouri R	39.4141	94.9597	39.4697	95.0452	5	GP	S	X	X	X	X	X	X	X
Missouri R	39.4998	95.0529	39.4697	95.0452	7	GP	S	X	X	X	X	X	X	X
Missouri R	39.4998	95.0529	39.5129	95.0788	9	GP	S	X	X	X	X	X	X	X
Nine Mile Cr	39.2627	94.8763	39.2355	94.9565	161	GP	E			X				
Owl Cr	39.4697	95.0452	39.4338	95.0855	33	GP	E							
Peters Cr	39.7465	94.9482	39.7721	95.0727	27	GP	E	X		X				
Quarry Cr	39.3523	94.9113	39.3538	94.9354	176	GP	E							
Rock Cr	39.6361	95.1051	39.7595	95.1249	21	GP	E							
Salt Cr	39.3890	94.9433	39.3027	95.0274	34	GP	S			X				
Seven Mile Cr	39.2243	94.8364	39.2376	94.9713	157	GP	E			X				
Smith Cr	39.8491	94.9378	39.8438	94.9681	28	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

MISSOURI RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: INDEPENDENCE-SUGAR (HUC 10240011)														
Sorter Cr	39.1712	94.7063	39.1529	94.7329	142	GP	E	O	X	X	X	X	X	X
Threemile Cr	39.3151	94.9072	39.3180	94.9683	36	GP	E							
Walnut Cr	39.4998	95.0529	39.5155	95.1848	23	GP	E							
Walnut Cr	39.7325	94.9710	39.7618	95.0539	25	GP	E							
Whiskey Cr	39.5347	95.1109	39.5184	95.1395	235	GP	E							
Whiskey Cr	39.5367	95.1077	39.5347	95.1109	9235	GP	R							
White Clay Cr	39.5587	95.1287	39.5244	95.1863	31	GP	E							
White Clay Cr	39.5591	95.1141	39.5587	95.1287	9031	GP	R							
SUBBASIN: LOWER MISSOURI-CROOKED (HUC 10300101)														
Blue R	38.8606	94.6083	38.8285	94.6347	33	GP	E	X	X	X	X	X	X	X
Brush Cr	39.0334	94.6072	38.9952	94.6222	54	GP	E		X	X	X	X	X	X
Camp Branch	38.8285	94.6347	38.7443	94.6635	56	GP	E	O	X	X	X	X	X	X
Coffee Cr	38.8084	94.6806	38.8221	94.8021	57	GP	E		X	X	X	X	X	X
Dyke Branch	38.9652	94.6078	38.9759	94.6316	55	GP	E		X	X	X	X	X	X
Indian Cr	38.9383	94.6078	38.8995	94.7563	32	GP	E		X	X	X	X	X	X
Negro Cr	38.8606	94.6083	38.8467	94.6926	58	GP	E		X	X	X	X	X	X
Tomahawk Cr	38.9305	94.6206	38.8674	94.7566	53	GP	E		X	X	X	X	X	X
Wolf Cr	38.8084	94.6806	38.8134	94.8116	1102	GP	E	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

NEOSHO RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: NEOSHO HEADWATERS (HUC 11070201)														
Allen Cr	38.4417	96.1870	38.6883	96.2264	5	GP	E			X				
Badger Cr	38.3941	96.0605	38.5245	96.0882	45	GP	E			X				
Big John Cr	38.6191	96.4403	38.7434	96.4043	37	GP	E							
Bluff Cr	38.6312	96.3681	38.7422	96.2080	8	GP	E			X				
Crooked Cr	38.7461	96.6370	38.6826	96.6720	35	GP	E		X					
Dows Cr	38.4292	96.1635	38.4417	96.1870	3	GP	E			X				
Dows Cr	38.4417	96.1870	38.6468	96.1873	4	GP	E			X				
Eagle Cr	38.2805	95.8764	38.2610	96.2110	25	GP	E			X				
Eagle Cr, South	38.2665	96.0409	38.2171	96.1428	47	GP	E							
East Cr	38.6205	96.4563	38.5364	96.6275	39	GP	E							
Elm Cr	38.6528	96.4831	38.6644	96.6661	36	GP	E			X				
Four Mile Cr	38.5708	96.5635	38.6399	96.6966	24	GP	E			X				
Fourmile Cr	38.2680	95.9473	38.1793	96.0163	48	GP	E			X				
Haun Cr	38.7515	96.6499	38.6383	96.7165	29	GP	E							
Horse Cr	38.7479	96.3126	38.8203	96.3218	33	GP	E							
Kahola Cr	38.5356	96.3323	38.5344	96.5093	43	GP	E							
Lairds Cr	38.7317	96.5809	38.8605	96.5870	30	GP	E							
Lanos Cr	38.7159	96.5434	38.8603	96.5552	21	GP	E		X					
Lebo Cr	38.2965	95.9050	38.4114	95.8447	51	GP	E							
Level Cr	38.7609	96.7354	38.7097	96.8047	9023	GP	E		X	X	X	X	X	X
Munkers Cr , E Br	38.7934	96.4085	38.8258	96.3282	31	GP	E			X				
Munkers Cr, Middle Br	38.7722	96.4535	38.8092	96.3917	32	GP	E		X		X			X
Neosho R	38.2751	95.8451	38.2805	95.8764	1	GP	S		X	X	X	X	X	X
Neosho R	38.5728	96.3811	38.6528	96.4831	10	GP	S		X	X	X	X	X	X
Neosho R	38.6528	96.4831	38.6788	96.5072	11	GP	S		X	X	X	X	X	X
Neosho R	38.3846	96.0520	38.4292	96.1635	2	GP	S		X	X	X	X	X	X
Neosho R	38.7142	96.5518	38.7739	96.7596	23	GP	E		X	X	X	X	X	X
Neosho R	38.2805	95.8764	38.3846	96.0520	26	GP	S		X	X	X	X	X	X
Neosho R	38.4292	96.1635	38.5356	96.3323	6	GP	S		X	X	X	X	X	X
Neosho R, E Fk	38.7300	96.4997	38.8313	96.3535	18	GP	E		X	X	X	X	X	X
Neosho R, W Fk	38.7613	96.7119	38.6696	96.7921	28	GP	E		X	X	X	X	X	X
Parkers Cr	38.7615	96.6671	38.8255	96.6824	27	GP	E							
Plum Cr	38.3439	95.9779	38.4301	95.9555	50	GP	E							
Plumb Cr	38.4251	96.1198	38.5090	96.0968	49	GP	E							
Rock Cr	38.5728	96.3811	38.6312	96.3681	7	GP	E			X				
Rock Cr	38.6312	96.3681	38.8138	96.2042	9	GP	E			X				
Rock Cr , E Br	38.7548	96.3036	38.8226	96.2294	34	GP	E							
Spring Cr	38.5990	96.5118	38.5428	96.5322	40	GP	E							
Stillman Cr	38.4674	96.1692	38.5540	96.1768	44	GP	E							
Taylor Cr	38.4360	96.1623	38.5174	96.1007	46	GP	E							
Unnamed Stream	38.6242	96.6108	38.6403	96.6644	946	GP	E							
Walker Branch	38.5858	96.4038	38.5695	96.4563	42	GP	E							
Wolf Cr	38.6005	96.4905	38.5420	96.4984	41	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

NEOSHO RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: NEOSHO HEADWATERS (HUC 11070201)														
Wrights Cr	38.5508	96.3474	38.6417	96.2812	38	GP	E							
SUBBASIN: UPPER COTTONWOOD (HUC 11070202)														
Antelope Cr	38.3232	97.1470	38.2214	97.2584	19	GP	E							
Bills Cr	38.1517	96.7960	38.0755	96.8655	30	GP	E							
Bruno Cr	38.2606	96.8340	38.3663	96.8893	27	GP	E			X				
Catlin Cr	38.2685	96.9741	38.2427	97.1491	20	GP	S			X				
Cedar Cr	38.2610	96.7923	38.0989	96.6456	22	EX	S	X	X	X	X	X	X	X
Clear Cr	38.3386	97.0213	38.3635	97.0165	4	GP	E	X	X	X	X	X	X	X
Clear Cr	38.3635	97.0165	38.5950	96.9157	5	GP	E		X	X	X	X	X	X
Clear Cr, E Br	38.4366	96.9625	38.5291	96.9000	24	GP	E		X	X	X	X	X	X
Coon Cr	38.2414	96.8121	38.2232	96.6871	32	GP	E							
Cottonwood R	38.2626	96.7885	38.2392	96.9138	1	GP	E	X	X	X	X	X	X	X
Cottonwood R	38.4545	97.1941	38.3850	97.3684	14	GP	E	X	X	X	X	X	X	X
Cottonwood R	38.2392	96.9138	38.2685	96.9741	2	GP	E	X	X	X	X	X	X	X
Cottonwood R	38.2685	96.9741	38.3386	97.0213	3	GP	E	X	X	X	X	X	X	X
Cottonwood R	38.3386	97.0213	38.3568	97.0701	7	GP	E	X	X	X	X	X	X	X
Cottonwood R	38.3568	97.0701	38.3693	97.0846	8	GP	E	X	X	X	X	X	X	X
Cottonwood R, South	38.3568	97.0701	38.3232	97.1470	17	GP	E		X	X	X	X	X	X
Cottonwood R, South	38.3232	97.1470	38.4055	97.3418	18	GP	E		X	X	X	X	X	X
Doyle Cr	38.2392	96.9138	38.2145	97.2555	21	GP	E		X	X	X	X	X	X
Dry Cr	38.4258	97.3765	38.3856	97.4232	401	GP	E	O	O	O	X	O	O	O
French Cr	38.3859	97.1678	38.4336	97.3255	16	GP	E		X	X				
Mud Cr	38.3635	97.0165	38.5683	97.1668	6	GP	S		X	X				
Perry Cr	38.5110	97.3036	38.4259	97.3336	23	GP	E							
Spring Branch	38.3060	97.0153	38.2508	97.1636	26	GP	E							
Spring Cr	38.1615	97.1050	38.2208	97.2058	28	GP	E			X				
Spring Cr	38.2345	96.9342	38.1206	96.9239	29	GP	S			X				
Stony Brook	38.3147	97.2619	38.2404	97.3130	25	GP	E							
Turkey Cr	38.1893	96.8206	38.0889	96.8730	31	GP	E							
Unnamed Stream	38.3189	97.1667	38.3364	97.2173	456	GP	E							
SUBBASIN: LOWER COTTONWOOD (HUC 11070203)														
Beaver Cr	38.4098	96.3335	38.4714	96.3480	29	GP	E							
Bloody Cr	38.3706	96.4473	38.2408	96.4023	40	GP	S			X				
Buck Cr	38.3710	96.5250	38.3169	96.6116	39	GP	E							
Buckeye Cr	38.4041	96.3683	38.4970	96.4710	44	GP	E			X				
Bull Cr	38.3929	96.3785	38.4576	96.4519	26	GP	E							
Camp Cr	38.5807	96.8123	38.5760	96.8962	14	GP	E							
Cannonball Cr	38.0796	96.4830	38.0955	96.4066	745	GP	E							
Coal Cr	38.3647	96.0812	38.2837	96.2360	43	GP	E			X				
Collett Cr	38.3954	96.7070	38.4691	96.7467	21	GP	S							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

NEOSHO RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER COTTONWOOD (HUC 11070203)														
Corn Cr	38.1682	96.5545	38.1625	96.4962	47	GP	E							
Cottonwood R	38.3783	96.0675	38.3638	96.4778	1	GP	S	X	X	X	X	X	X	X
Cottonwood R	38.3638	96.4778	38.3911	96.6247	2	GP	S	X	X	X	X	X	X	X
Cottonwood R	38.3911	96.6247	38.3777	96.6342	4	GP	S	X	X	X	X	X	X	X
Cottonwood R	38.3777	96.6342	38.2626	96.7885	6	GP	S	X	X	X	X	X	X	X
Cottonwood R, S Fk	38.1041	96.5417	38.0252	96.5316	10	EX	S	X	X	X	X	X	X	X
Cottonwood R, S Fk	38.3638	96.4778	38.1041	96.5417	9	EX	S	X	X	X	X	X	X	X
Coyne Branch	38.2867	96.7427	38.2271	96.6886	33	GP	E							
Crocker Cr	38.1815	96.5624	38.1549	96.6429	46	GP	E							
Diamond Cr	38.3911	96.6247	38.6414	96.7396	3	GP	E	X	X	X	X	X	X	X
Dodds Cr	38.5459	96.7404	38.6288	96.7111	15	GP	E							
Dry Cr	38.3713	96.1390	38.2796	96.2590	42	GP	E	O	O	O	X	O	O	O
Fox Cr	38.3939	96.5508	38.5245	96.6266	19	GP	E			X				X
French Cr	38.2725	96.7692	38.3620	96.8280	32	GP	E							
Gannon Cr	38.4166	96.6498	38.4765	96.5919	24	GP	E							
Gould Cr	38.3477	96.6675	38.3739	96.7055	36	GP	E							
Holmes Cr	38.3210	96.6901	38.2759	96.6780	35	GP	E							
Jacob Cr	38.3992	96.3623	38.2753	96.3451	28	GP	S			X				
Kirk Cr	38.2128	96.5629	38.1959	96.6202	48	GP	E							
Little Cedar Cr	38.1041	96.5417	38.0594	96.4262	11	GP	E							
Little Cedar Cr	38.1540	96.5535	38.1316	96.4211	45	GP	S							
Mercer Cr	38.1499	96.5557	38.0793	96.5921	716	GP	E							
Middle Cr	38.3777	96.6342	38.5543	96.8850	5	GP	S			X				
Mile-and-a-Half Cr	38.5643	96.7663	38.6600	96.7962	13	GP	E							
Moon Cr	38.3968	96.2734	38.4689	96.3025	31	GP	E							
Mulvane Cr	38.4387	96.6643	38.4991	96.6398	22	GP	E							
Palmer Cr	38.4892	96.5643	38.5127	96.6272	403	GP	E							
Peyton Cr	38.3813	96.4205	38.4987	96.5086	25	GP	E			X				
Phenis Cr	38.3862	96.2631	38.2845	96.3005	30	GP	E							
Pickett Cr	38.5011	96.7050	38.4932	96.7688	18	GP	E							
Prather Cr	38.3855	96.5463	38.3298	96.6147	23	GP	E							
Rock Cr	38.2646	96.5366	38.1768	96.6535	37	GP	E			X				
Schaffer Cr	38.4784	96.6907	38.5507	96.6494	17	GP	E							
School Cr	38.5149	96.7111	38.5730	96.6781	16	GP	E							
Sharpes Cr	38.2733	96.5180	38.1482	96.4427	38	GP	E							
Silver Cr	38.3079	96.7181	38.3690	96.7870	34	GP	E							
Six Mile Cr	38.5602	96.7548	38.6296	96.8907	452	GP	S	X	X	X	X	X	X	X
Spring Cr	38.3745	96.4302	38.3200	96.4043	41	GP	E							
Stout Run	38.3683	96.4840	38.4427	96.5152	27	GP	E							
Stribby Cr	38.4085	96.7845	38.5114	96.7942	20	GP	E							
SUBBASIN: UPPER NEOSHO (HUC 11070204)														

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued).

NEOSHO RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER NEOSHO (HUC 11070204)														
Badger Cr	38.1493	95.6545	38.1975	95.6021	42	GP	E							
Big Cr	38.0706	95.6692	38.0946	95.7266	14	GP	E	X	X	X				
Big Cr	37.6256	95.3366	37.9067	95.1720	2	GP	E	X		X				
Big Cr, North	38.0946	95.7266	38.1563	96.0018	16	GP	E							
Big Cr, South	38.0946	95.7266	37.9864	95.9420	17	GP	E			X				
Bloody Run	37.8111	95.4935	37.8795	95.5196	25	GP	S							
Carlyle Cr	37.9837	95.3923	38.0650	95.3665	47	GP	E							
Charles Branch	37.8228	95.3910	37.8749	95.3959	27	GP	E							
Cherry Cr	37.8498	95.5757	37.9988	95.7053	20	GP	E			X				
Coal Cr	37.7691	95.4505	37.8612	95.2591	4	GP	E			X				
Cottonwood Cr	37.9651	95.4139	38.0217	95.4163	48	GP	E			X				
Crooked Cr	38.0615	95.6252	38.2608	95.5670	44	GP	E			X				
Deer Cr	37.9508	95.4421	38.1207	95.1558	9	GP	E	X	X	X	X	X	X	X
Dinner Cr	38.0636	95.8565	38.1347	95.9731	823	GP	E			X				
Draw Cr	37.6541	95.3423	37.7163	95.3601	34	GP	E							
Elm Cr	37.9117	95.3889	37.9490	95.2096	1050	GP	E							
Goose Cr	37.7411	95.2754	37.8167	95.2684	29	GP	E							
Indian Cr	37.9796	95.5000	38.1427	95.4616	924	GP	E							
Little Indian Cr	38.0639	95.4796	38.1559	95.5296	939	GP	S							
Little Turkey Cr	37.6403	95.4166	37.6545	95.4572	397	GP	E	O	X	X	X	X	X	X
Long Cr	38.1067	95.6675	38.3660	95.6097	12	GP	E			X				
Martin Cr	37.9816	95.4794	38.0882	95.3778	49	GP	E			X				
Mud Cr	37.7765	95.4510	37.7827	95.5161	26	GP	E							
Mud Cr	37.7919	95.2212	37.8569	95.2423	31	GP	E							
Neosho R	37.6099	95.3276	37.6181	95.3396	1	GP	S	X	X	X	X	X	X	X
Neosho R	37.9280	95.4382	38.0700	95.6691	10	GP	S	X	X	X	X	X	X	X
Neosho R	38.0706	95.6692	38.1067	95.6675	11	GP	S	X	X	X	X	X	X	X
Neosho R	38.1067	95.6675	38.2423	95.7574	13	GP	S	X	X	X	X	X	X	X
Neosho R	37.6256	95.3366	37.7691	95.4505	3	GP	S	X	X	X	X	X	X	X
Neosho R	37.7765	95.4510	37.7905	95.4497	5	GP	S	X	X	X	X	X	X	X
Neosho R	37.7905	95.4497	37.8976	95.4240	6	GP	S	X	X	X	X	X	X	X
Neosho R	37.8990	95.4221	37.9280	95.4382	8	GP	S	X	X	X	X	X	X	X
Onion Cr	37.8459	95.4725	37.9184	95.5083	24	GP	S							
Owl Cr	37.7905	95.4497	37.8498	95.5757	19	GP	E							
Owl Cr	37.8498	95.5757	37.9261	95.8795	21	GP	E							
Owl Cr, South	37.8506	95.5797	37.8657	95.7501	552	GP	S							
Plum Cr	37.8658	95.5878	37.9417	95.5956	22	GP	E							
Rock Cr	38.1905	95.7338	38.1682	95.8159	15	GP	E			X				
Rock Cr	37.9767	95.5159	37.9499	95.5959	23	GP	E			X				
Rock Cr	37.8997	95.4202	37.9679	95.2059	7	GP	E			X				
School Cr	38.2988	95.6353	38.3476	95.6434	38	GP	E							
Scott Cr	38.1831	95.6415	38.2834	95.5752	40	GP	E							
Slack Cr	37.8016	95.4018	37.8038	95.3076	30	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

NEOSHO RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER NEOSHO (HUC 11070204)														
Spring Cr	38.0064	95.5499	38.1234	95.5168	46	GP	E			X				
Sutton Cr	37.7083	95.4127	37.7422	95.3652	35	GP	E							
Turkey Branch	37.7085	95.3140	37.7666	95.3388	28	GP	E							
Turkey Cr	38.0700	95.6691	37.9188	95.8860	18	GP	E			X				
Turkey Cr	37.6351	95.4126	37.6062	95.5280	32	GP	E	O		X				
Twiss Cr	38.0276	95.5758	38.1217	95.5241	45	GP	E							
Varvel Cr	38.0691	95.8294	38.1154	95.8989	43	GP	E							
Village Cr	37.7085	95.4175	37.6316	95.5992	33	GP	E			X				
Wolf Cr	38.1472	95.7057	38.3284	95.6732	37	GP	S							
SUBBASIN: MIDDLE NEOSHO (HUC 11070205)														
Bachelor Cr	37.2801	95.2244	37.2973	95.4096	396	GP	E							
Bachelor Cr	37.5007	95.2100	37.4466	95.2293	40	GP	E			X				
Canville Cr	37.5628	95.2974	37.7405	95.0962	16	GP	E			X				
Center Cr	37.0978	95.0446	37.1526	94.9253	25	GP	E							
Cherry Cr	37.0789	95.0696	37.3188	94.8316	4	GP	E			X				
Deer Cr	37.1034	95.1942	37.2321	95.2978	27	GP	E			X				
Denny Branch	37.1759	94.9729	37.1753	94.8808	31	GP	E							
Downey Cr	37.5034	95.1538	37.5404	95.0898	731	GP	E							
Elk Cr	37.5961	95.3252	37.5000	95.4632	19	GP	E			X				
Elm Cr	37.4666	94.9210	37.5416	94.9546	43	GP	E			X				
Flat Rock Cr	37.5006	95.1574	37.5585	95.1309	12	GP	S			X				
Flat Rock Cr	37.5585	95.1309	37.7063	95.0214	14	GP	E			X				
Fly Cr	37.0128	95.0471	37.1041	94.8498	1	GP	E	X		X				
Fourmile Cr	37.5338	95.2125	37.6614	95.1554	49	GP	E							
Grindstone Cr	37.4248	94.9381	37.4849	94.9780	42	GP	E							
Hackberry Cr	37.0976	95.2033	37.0844	95.3532	460	GP	E							
Hickory Cr	37.3379	95.1043	37.5364	94.9791	10	GP	E			X				
Labette Cr	37.0483	95.0820	37.0991	95.1556	20	GP	S	X	X	X	X	X	X	X
Labette Cr	37.0991	95.1556	37.3102	95.2385	21	GP	E	X	X	X	X	X	X	X
Labette Cr	37.3102	95.2385	37.4785	95.4584	22	GP	E	X	X	X	X	X	X	X
Lake Cr	37.0991	95.1556	37.0038	95.2898	24	GP	E			X				
Lightning Cr	37.1765	95.0715	37.3495	94.9584	6	GP	E			X				
Lightning Cr	37.3495	94.9584	37.6253	94.9010	8	GP	E			X				
Limestone Cr	37.3495	94.9584	37.4274	94.8238	7	GP	E							
Little Cherry Cr	37.2180	94.9426	37.3069	94.8043	32	GP	E							
Little Elk Cr	37.5683	95.4054	37.5053	95.4207	47	GP	E							
Little Fly Cr	37.0333	95.0192	37.0518	94.9468	26	GP	E							
Little Labette Cr	37.3102	95.2385	37.4546	95.4360	23	GP	E			X				
Little Walnut Cr	37.5665	95.0927	37.6910	95.0313	46	GP	E							
Litup Cr	37.2832	95.1037	37.3555	95.0287	36	GP	E							
Mulberry Cr	37.3335	94.9652	37.4412	94.9854	35	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

NEOSHO RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: MIDDLE NEOSHO (HUC 11070205)														
Murphy Cr	37.4731	95.1298	37.5180	95.0521	41	GP	E							
Neosho R	37.3507	95.1234	37.5007	95.2100	11	GP	S	X	X	X	X	X	X	X
Neosho R	37.5007	95.2100	37.5731	95.3109	15	GP	S	X	X	X	X	X	X	X
Neosho R	37.5628	95.2974	37.5731	95.3109	17	GP	S	X	X	X	X	X	X	X
Neosho R	37.6100	95.3267	37.5961	95.3252	18	GP	S	X	X	X	X	X	X	X
Neosho R	36.9995	95.0351	37.0483	95.0820	2	EX	S	X	X	X	X	X	X	X
Neosho R	37.0969	95.0695	37.0789	95.0696	3	EX	S	X	X	X	X	X	X	X
Neosho R	37.0969	95.0695	37.2035	95.1146	5	EX	S	X	X	X	X	X	X	X
Neosho R	37.2035	95.1146	37.3507	95.1234	9	GP	S	X	X	X	X	X	X	X
Ogeese Cr	37.5144	95.2294	37.4909	95.3550	38	GP	E							
Pecan Cr	37.6031	95.2949	37.6615	95.2683	45	GP	E							
Plum Cr	37.3069	94.9957	37.3084	94.9236	34	GP	E							
Rock Cr	37.5731	95.3109	37.5198	95.3684	48	GP	E							
Spring Cr	37.2063	95.1986	37.2325	95.2870	30	GP	E			X				
Stink Branch	37.2588	95.0414	37.2818	94.9746	37	GP	E							
Thunderbolt Cr	37.4142	94.9309	37.5161	94.8494	44	GP	E							
Tolen Cr	37.3490	95.2519	37.4113	95.2212	39	GP	E							
Town Cr	37.0208	95.0624	37.0365	95.1596	28	GP	E							
Turkey Cr	37.0848	95.1325	37.0000	95.2156	29	GP	E			X				X
Unnamed Stream	37.2466	95.2020	37.2874	95.1780	298	GP	E	O	X	X	X	X	X	X
Unnamed Stream	37.2862	95.2208	37.3085	95.1907	303	GP	E	O	X	X	X	X	X	X
Unnamed Stream	37.2892	95.2205	37.3188	95.1992	304	GP	E	O	X	X	X	X	X	X
Unnamed Stream	37.3047	95.2266	37.3240	95.2018	305	GP	E	O	X	X	X	X	X	X
Walnut Cr	37.5585	95.1309	37.6553	94.9746	13	GP	E			X				
Wolf Cr	37.3559	94.9106	37.3576	94.8345	33	GP	E	O	X	X	X	X	X	X
SUBBASIN: LAKE O' THE CHEROKEES (HUC 11070206)														
Fourmile Cr	36.9992	94.9315	37.0725	94.8812	18	GP	E							
Tar Cr	36.9989	94.8520	37.0666	94.8439	19	GP	E	O	O	X	X	O	O	X
SUBBASIN: SPRING (HUC 11070207)														
Brush Cr	37.0619	94.7280	37.2214	94.8215	23	GP	E	O		X				
Brush Cr	37.2968	94.6799	37.3750	94.7928	26	GP	S	O		X				
Clear Cr	37.5117	94.8090	37.5785	94.7594	28	GP	E	O						
Cow Cr	37.1985	94.6374	37.6051	94.8457	16	GP	S	X	X	X	X	X	X	X
Cow Cr, East	37.3576	94.6842	37.5052	94.6556	24	GP	S	O						
First Cow Cr	37.3873	94.7218	37.5437	94.7269	27	GP	S	O						
Little Shawnee Cr	37.1792	94.6967	37.2866	94.7859	22	GP	E			X				
Long Branch	37.2424	94.6675	37.2898	94.7337	21	GP	E			X				
Shawnee Cr	37.0914	94.6857	37.2499	94.7998	17	GP	E			X				
Shoal Cr	37.0391	94.6685	37.0328	94.6175	2	EX	S	X	X	X	X	X	X	X
Short Cr	37.0933	94.6825	37.0904	94.6179	881	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

NEOSHO RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: SPRING (HUC 11070207)														
Spring R	36.9987	94.7125	37.0553	94.7012	1	EX	S	X	X	X	X	X	X	X
Spring R	37.1298	94.6269	37.1436	94.6177	19	EX	S	X	X	X	X	X	X	X
Spring R	37.0702	94.6977	37.0914	94.6857	3	EX	S	X	X	X	X	X	X	X
Spring R	37.0914	94.6857	37.1298	94.6269	4	EX	S	X	X	X	X	X	X	X
Spring R	37.1524	94.6178	37.1985	94.6374	6	EX	S	X	X	X	X	X	X	X
Spring R	37.1985	94.6374	37.1942	94.6179	7	EX	S	X	X	X	X	X	X	X
Taylor Branch	37.2874	94.6700	37.3677	94.6171	25	GP	S			X				
Turkey Cr	37.1298	94.6269	37.1247	94.6177	18	GP	S	X	X	X	X	X	X	X
Unnamed Stream	37.0319	94.6192	37.0143	94.6174	886	EX	S	X	X	X	X	X	X	X
Willow Cr	37.0365	94.7270	37.0831	94.8455	20	GP	E			X				

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SMOKY/SALINE RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: SMOKY HILL HEADWATERS (HUC 10260001)														
Capper Draw	38.9013	101.5174	38.9634	101.5884	311	GP	S	O						
Coon Cr	38.8895	101.5936	38.8286	101.6187	20	GP	S	O						
Depperschmidt Draw	38.9071	101.4723	39.0089	101.6310	309	GP	S	O						
Eagletail Cr	38.8994	101.6938	38.8709	101.9593	17	GP	S	O						
Goose Cr	38.9388	101.7528	39.0603	102.0463	5	GP	E	O						
Lake Cr	38.9246	101.4067	39.1468	101.8945	2	GP	E	O						
Lake Cr, S Fk	39.0760	101.7182	39.1133	101.9762	18	GP	E	O						
Pond Cr	38.8958	101.6100	39.0217	101.7442	21	GP	S	O						
Rose Cr	38.8878	101.6322	38.8225	101.7616	19	GP	S	O						
Smoky Hill R	38.9204	101.2805	38.9246	101.4067	1	GP	S	O	X	X	X	X	X	X
Smoky Hill R	38.9216	102.0316	38.9171	102.0455	10	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.9246	101.4067	38.8994	101.6938	3	GP	S	O	X	X	X	X	X	X
Smoky Hill R	38.8994	101.6938	38.9388	101.7528	4	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.9388	101.7528	38.9258	101.8888	6	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.9258	101.8888	38.9216	102.0316	8	GP	E	O	X	X	X	X	X	X
Unnamed Stream	38.9216	102.0316	38.9387	102.0455	9	GP	E	O						
Willow Cr	38.9258	101.8888	38.9817	102.0458	7	GP	S	O						
SUBBASIN: NORTH FORK SMOKY HILL (HUC 10260002)														
Sand Cr	39.0468	101.3835	39.2173	101.6087	2	GP	E	O						
Sandy Cr	39.1869	101.8534	39.1986	102.0472	4	GP	E	O						
Smoky Hill R, N Fk	38.9255	101.2792	39.0468	101.3835	1	GP	E	O	X	X	X	X	X	X
Smoky Hill R, N Fk	39.0468	101.3835	39.1869	101.8534	3	GP	E	O	X	X	X	X	X	X
Smoky Hill R, N Fk	39.1869	101.8534	39.1559	101.9368	5	GP	E	O	X	X	X	X	X	X
Smoky Hill R, N Fk	39.1559	101.9368	39.1394	102.0467	6	GP	E	O		X	X	X	X	X
Turtle Cr	39.1559	101.9368	39.1212	102.0468	15	GP	E	O						
SUBBASIN: UPPER SMOKY HILL (HUC 10260003)														
Big Windy Cr	38.7789	100.1675	38.6756	100.2074	38	GP	E	O						
Cheyenne Cr	38.7422	100.5173	38.6147	100.5809	36	GP	E	O						
Downer Cr	38.7853	99.9303	38.9449	99.9660	11	GP	E	O						
Downer Cr, E Br	38.9000	99.9889	38.9592	100.0475	39	GP	E	O						
Gibson Cr	38.7899	100.0801	38.7407	100.0764	34	GP	E	O						
Goat Canyon Cr	38.7153	99.7821	38.6692	99.7556	41	GP	E	O						
Hell Cr	38.7537	100.7255	38.7157	100.8749	25	GP	E	O						
Indian Cr	38.7761	100.2702	38.9113	100.5482	15	GP	E	O						
Indian Cr	38.8138	99.8151	38.9257	99.9118	7	GP	E	O						
Page Cr	38.7501	99.7609	38.6539	99.9120	31	GP	E	O						
Plum Cr	38.7468	100.4538	38.9822	100.9859	18	GP	E	O						
Salt Cr	38.7499	100.5577	38.6277	100.7922	26	GP	E	O						
Salt Cr, East	38.6953	100.6188	38.6351	100.6553	35	GP	E	O						
Sand Cr	38.7876	99.9123	38.6645	100.0709	29	GP	E	O						

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SMOKY/SALINE RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER SMOKY HILL (HUC 10260003)														
Sand Cr	38.7698	100.2141	38.6766	100.2198	37	GP	E	O						
Sand Cr, E Br	38.7324	99.9419	38.6309	99.9596	40	GP	E	O						
Six Mile Cr	38.8830	101.0642	39.0390	101.2006	23	GP	E	O						
Smoky Hill R	38.7876	99.9123	38.7853	99.9303	10	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.7853	99.9303	38.8081	100.0493	12	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.8081	100.0493	38.7959	100.1122	13	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.7959	100.1122	38.7761	100.2702	14	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.7761	100.2702	38.7519	100.2810	16	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.7519	100.2810	38.7468	100.4538	17	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.7468	100.4538	38.7499	100.5577	19	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.7499	100.5577	38.7537	100.7255	20	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.7537	100.7255	38.7993	100.8590	21	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.7993	100.8590	38.8830	101.0642	22	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.8830	101.0642	38.9204	101.2805	24	GP	E	O	X	X	X	X	X	X
Smoky Hill R	38.7850	99.8689	38.7876	99.9123	9	GP	E	O	X	X	X	X	X	X
Spring Cr, West	38.9015	101.1677	39.0302	101.2194	33	GP	E	O						
Unnamed Stream	38.7519	100.2810	38.6500	100.3371	27	GP	E	O						
Wild Horse Cr	38.7959	100.1122	38.6472	100.2367	28	GP	E	O						
SUBBASIN: LADDER (HUC 10260004)														
Chalk Cr	38.7692	100.9265	38.7601	101.6220	4	GP	S	O						
Ladder Cr	38.7978	100.8629	38.7719	100.9294	1	GP	S	O	X	X	X	X	X	X
Ladder Cr	38.8015	102.0054	38.8259	102.0450	10	GP	E	O	X	X	X	X	X	X
Ladder Cr	38.7719	100.9294	38.7692	100.9265	3	GP	S	O	X	X	X	X	X	X
Ladder Cr	38.7692	100.9265	38.5974	101.2242	5	GP	S	O	X	X	X	X	X	X
Ladder Cr	38.5974	101.2242	38.5853	101.4617	7	GP	S	O	X	X	X	X	X	X
Ladder Cr	38.5853	101.4617	38.6759	101.5695	8	GP	S	O	X	X	X	X	X	X
Ladder Cr	38.6759	101.5695	38.8015	102.0054	9	GP	S	O	X	X	X	X	X	X
Ladder Cr, Middle	38.6918	101.7070	38.7511	101.9999	13	GP	E	O						
Ladder Cr, Middle, N Fk	38.7464	101.8478	38.7883	101.9534	17	GP	E	O						
Ladder Cr, Middle, S Fk	38.5853	101.4617	38.6493	101.8309	15	GP	E	O						
Ladder Cr, South	38.6759	101.5695	38.6918	101.7070	12	GP	E	O						
Ladder Cr, South	38.6918	101.7070	38.6704	102.0447	14	GP	E	O						
Twin Butte Cr	38.7719	100.9294	38.7900	101.5433	2	GP	S	O						
Unnamed Stream	38.8015	102.0054	38.7991	102.0450	11	GP	E	O						
Unnamed Stream	38.5974	101.2242	38.6502	101.3795	6	GP	E	O						
SUBBASIN: HACKBERRY (HUC 10260005)														
Hackberry Cr	38.8081	100.0493	38.8969	100.1858	1	GP	E	O	X	X	X	X	X	X
Hackberry Cr	38.8969	100.1858	38.9509	100.5489	3	GP	E	O	X	X	X	X	X	X
Hackberry Cr, M Br	38.9509	100.5489	38.9651	100.5726	4	GP	E	O						
Hackberry Cr, M Br	38.9651	100.5726	39.0719	101.2964	6	GP	E	O						

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SMOKY/SALINE RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: HACKBERRY (HUC 10260005)														
Hackberry Cr, N Br	38.9651	100.5726	39.1290	101.0322	5	GP	E	O						
Hackberry Cr, S Br	38.9509	100.5489	39.0260	101.0340	7	GP	E	O						
Spring Cr	38.8969	100.1858	39.0092	100.3295	2	GP	E	O						
Spring Cr, West	38.9681	100.5170	39.0287	100.5501	8	GP	E	O						
SUBBASIN: MIDDLE SMOKY HILL (HUC 10260006)														
Ash Cr	38.6648	98.1736	38.5561	98.2087	1190	GP	E		X					
Beaver Cr	38.7985	98.5906	38.6405	98.6811	33	GP	E	X		X				
Big Timber Cr	38.7075	99.2689	38.6432	99.3180	24	GP	E							
Big Timber Cr	38.6432	99.3180	38.5981	99.4768	25	GP	E							
Big Timber Cr	38.5981	99.4768	38.6688	99.7439	27	GP	E							
Blood Cr	38.7814	98.4182	38.6252	98.5236	35	GP	E			X				
Buck Cr	38.7100	99.0831	38.6011	99.1830	29	GP	E							
Buffalo Cr	38.7387	98.3026	38.8883	98.3191	6	GP	E			X				
Clear Cr	38.6775	98.0784	38.7957	98.1358	42	GP	E		X					
Coal Cr	38.7867	98.4873	38.6291	98.5824	34	GP	E							
Cow Cr	38.7602	98.3675	38.8887	98.3269	38	GP	E							
Eagle Cr	38.7151	99.0687	38.5593	99.0648	30	GP	E							
Fossel Cr	38.7915	98.8038	38.8913	98.9645	13	GP	E	O	X	X	X	X	X	X
Goose Cr	38.7910	98.7032	38.6304	98.7618	39	GP	E							
Landon Cr	38.7765	98.8451	38.6129	98.8996	31	GP	E			X				
Loss Cr	38.7430	98.3235	38.6517	98.3816	44	GP	E							
Mud Cr	38.6682	98.1722	38.6354	98.2230	47	GP	E							
Oxide Cr	38.7058	98.2070	38.5995	98.2941	45	GP	E							
Sellens Cr	38.7913	98.7733	38.6140	98.8653	32	GP	E			X				
Shelter Cr	38.6983	99.2148	38.5850	99.2116	43	GP	E							
Skunk Cr	38.6781	98.1361	38.6027	98.1528	48	GP	E		X					
Smoky Hill R	38.7867	98.4873	38.7985	98.5906	10	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.7985	98.5906	38.7913	98.7733	11	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.7913	98.7733	38.7915	98.8038	12	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.7915	98.8038	38.7765	98.8451	14	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.7765	98.8451	38.7903	98.9194	15	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.7903	98.9194	38.7151	99.0687	16	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.7151	99.0687	38.7100	99.0831	17	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.7100	99.0831	38.7075	99.2689	18	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.7075	99.2689	38.7169	99.3362	19	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.7169	99.3362	38.7236	99.4062	21	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.7236	99.4062	38.7891	99.7221	22	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.6621	98.0733	38.7387	98.3026	5	EX	S	X	X	X	X	X	X	X
Smoky Hill R	38.7387	98.3026	38.7461	98.3466	7	EX	S	X	X	X	X	X	X	X
Smoky Hill R	38.7461	98.3466	38.7814	98.4182	8	EX	S	X	X	X	X	X	X	X
Smoky Hill R	38.7814	98.4182	38.7867	98.4873	9	EX	S	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SMOKY/SALINE RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: MIDDLE SMOKY HILL (HUC 10260006)														
Spring Cr	38.7839	98.4324	38.7401	98.4830	41	GP	E							
Thompson Cr	38.6475	98.0704	38.5325	98.1861	37	GP	E		X					
Timber Cr	38.5981	99.4768	38.7170	99.6736	26	GP	E							
Turkey Cr	38.7333	98.2644	38.6234	98.3170	46	GP	E							
Unnamed Stream	38.7169	99.3362	38.8685	99.4676	20	GP	E							
Unnamed Stream	38.7236	99.4062	38.7062	99.5550	23	GP	E							
Unnamed Stream	38.6432	99.3180	38.5909	99.3230	28	GP	E							
Wilson Cr	38.7897	98.4504	38.8613	98.4874	40	GP	E							
Wolf Cr	38.7461	98.3466	38.6549	98.4773	36	GP	E							
SUBBASIN: BIG (HUC 10260007)														
Big Cr	38.7903	98.9194	38.8082	98.9798	1	GP	E	X	X	X	X	X	X	X
Big Cr	38.8082	98.9798	38.7980	99.0838	3	GP	E	X	X	X	X	X	X	X
Big Cr	38.7980	99.0838	38.9367	99.6089	5	GP	E	X	X	X	X	X	X	X
Big Cr	38.9367	99.6089	39.1232	100.7844	7	GP	E	O	X	X	X	X	X	X
Big Cr, N Fk	38.7980	99.0838	39.0034	99.3729	4	GP	E	O	X	X	X	X	X	X
Chetolah Cr	38.8506	99.3121	38.9427	99.3254	8	GP	E	O						
Mud Cr	38.8215	99.1040	38.9601	99.1696	9	GP	E							
Ogallah Cr	38.9367	99.6089	39.0430	99.8498	6	GP	E	O						
Walker Cr	38.8082	98.9798	39.0013	99.1626	2	GP	E	O						
SUBBASIN: LOWER SMOKY HILL (HUC 10260008)														
Basket Cr	39.1584	97.1966	39.1340	97.2936	40	GP	E							
Battle Cr	38.5396	97.4508	38.4179	97.4755	23	GP	E							
Carry Cr	38.8707	96.9215	38.6993	97.1048	35	GP	S			X				
Chapman Cr	38.9602	97.0064	39.2064	97.3005	3	GP	E	X	X	X	X	X	X	X
Chapman Cr	39.2064	97.3005	39.3749	97.4953	4	GP	E	X	X	X	X	X	X	X
Chapman Cr, West	39.2064	97.3005	39.2747	97.4918	5	GP	E		X	X	X	X	X	X
Dry Cr	38.7447	97.5837	38.5870	97.7958	36	GP	E							
Dry Cr, East	38.8516	97.5342	38.7586	97.5314	43	GP	E							
Gypsum Cr	38.8607	97.4129	38.6818	97.4197	18	GP	E	O	X	X	X	X	X	X
Gypsum Cr	38.6818	97.4197	38.5420	97.4495	20	GP	E	O	X	X	X	X	X	X
Gypsum Cr	38.5420	97.4495	38.5396	97.4508	21	GP	E	O	X	X	X	X	X	X
Gypsum Cr	38.5396	97.4508	38.4378	97.4942	22	GP	E	O	X	X	X	X	X	X
Gypsum Cr, North	38.5333	97.4746	38.5579	97.5437	57	GP	E	O	X	X	X	X	X	X
Gypsum Cr, South	38.5420	97.4495	38.3927	97.4256	24	GP	E	O	X	X	X	X	X	X
Gypsum Cr, W Br	38.7860	97.4356	38.6872	97.5160	44	GP	E	O	X	X	X	X	X	X
Hobbs Cr	38.6938	97.4208	38.5974	97.3495	48	GP	E							
Holland Cr	38.8797	97.2485	38.7438	97.2887	25	GP	E			X				
Holland Cr, East	38.7438	97.2887	38.5937	97.2742	27	GP	E							
Holland Cr, West	38.7438	97.2887	38.5912	97.3102	26	GP	E							
Kentucky Cr	38.6168	97.6158	38.4552	97.5629	17	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SMOKY/SALINE RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER SMOKY HILL (HUC 10260008)														
Kentucky Cr. West	38.5241	97.6089	38.4695	97.6208	54	GP	E							
Lime Cr	38.7810	96.9610	38.6006	96.9115	51	GP	S	X	X	X	X	X	X	X
Lone Tree Cr	38.9450	97.0840	38.9972	97.1194	41	GP	E							
Lyon Cr	38.9801	96.8457	38.8707	96.9215	31	EX	S	X	X	X	X	X	X	X
Lyon Cr	38.7376	96.9610	38.5529	96.9902	540	EX	S	X	X	X	X	X	X	X
Lyon Cr. W Br	38.8707	96.9215	38.6420	97.0925	34	GP	S			X				
Mcallister Cr	38.7279	97.4224	38.7040	97.3516	49	GP	E							
Middle Branch	38.6062	97.1968	38.5499	97.1956	58	GP	E							
Mud Cr	38.8882	97.2140	39.1288	97.3304	8	GP	E							
Otter Cr	38.9527	96.8487	38.8952	96.8182	42	GP	E							
Paint Cr	38.5232	97.7098	38.4408	97.7152	52	GP	E							
Pewee Cr	38.6338	97.5903	38.5751	97.5458	56	GP	E							
Sand Cr	38.6023	97.9329	38.7045	97.9791	46	GP	E							
Sharps Cr	38.5273	97.7627	38.4954	97.9440	16	GP	E							
Smoky Hill R	39.0589	96.7912	38.9801	96.8457	1	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.8797	97.2485	38.8982	97.3748	10	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.9039	97.3695	38.8607	97.4129	11	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.8607	97.4129	38.8575	97.5062	12	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.8575	97.5062	38.6168	97.6158	13	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.6168	97.6158	38.5273	97.7627	14	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.5273	97.7627	38.5963	97.9659	15	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.9801	96.8457	38.9487	97.0215	2	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.9487	97.0215	38.8827	97.1916	6	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.8844	97.2234	38.8827	97.1916	7	GP	E	X	X	X	X	X	X	X
Smoky Hill R	38.8844	97.2234	38.8844	97.2234	9	GP	E	X	X	X	X	X	X	X
Spring Cr	38.7807	97.4329	38.6255	97.5234	45	GP	E							
Stag Cr	38.6818	97.4197	38.5966	97.5309	19	GP	E							
Turkey Cr	38.8827	97.1916	38.8046	97.1818	28	GP	E			X				
Turkey Cr	38.8046	97.1818	38.5798	97.2490	30	GP	E			X				
Turkey Cr. East	38.6933	97.1622	38.5661	97.0933	50	GP	E							
Turkey Cr. W Br	38.8046	97.1818	38.6272	97.2543	29	GP	E			X				
Unnamed Stream	38.7549	97.0892	38.7204	97.1263	32	GP	S			X				
Unnamed Stream	38.7044	97.0502	38.7071	97.0853	515	GP	S							
Unnamed Stream	38.7347	96.9743	38.7363	96.9995	542	GP	S							
Unnamed Stream	38.7225	96.9519	38.7217	96.9389	618	GP	S							
Unnamed Stream	38.8731	96.9115	38.8369	96.8852	638	GP	E	O	X	X	X	X	X	X
Wiley Cr	38.6087	97.9284	38.6784	97.9351	47	GP	E							
SUBBASIN: UPPER SALINE (HUC 10260009)														
Cedar Cr	38.9598	98.6783	38.8622	98.7869	30	GP	E							
Chalk Cr	39.1115	99.8176	39.2057	99.8601	26	GP	E							
Coyote Cr	39.1118	100.0879	39.0277	100.1332	23	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SMOKY/SALINE RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER SALINE (HUC 10260009)														
Eagle Cr	39.1094	98.9107	39.2730	99.0796	6	GP	E							
Happy Cr	39.1172	99.8491	39.2359	99.9769	25	GP	E							
Paradise Cr	38.9837	98.7907	39.1094	98.9107	5	GP	E			X				
Paradise Cr	39.1094	98.9107	39.2266	99.3908	7	GP	E	O	O	X	X	O	O	X
Plum Cr	39.1286	100.1434	39.0912	100.2595	22	GP	E	O						
Saline R	39.0902	99.3460	39.0794	99.4861	11	GP	E	X	X	X	X	X	X	X
Saline R	39.0794	99.4861	39.1135	99.7044	12	GP	E	X	X	X	X	X	X	X
Saline R	39.1135	99.7044	39.1132	99.9663	14	GP	E	O	X	X	X	X	X	X
Saline R	39.1150	99.9709	39.1599	100.7132	16	GP	E	O	X	X	X	X	X	X
Saline R	38.9787	98.7431	38.9837	98.7907	4	GP	E	X	X	X	X	X	X	X
Saline R	38.9837	98.7907	38.9594	98.8822	8	EX	E	X	X	X	X	X	X	X
Saline R	38.9594	98.8822	39.0902	99.3460	9	EX	E	X	X	X	X	X	X	X
Saline R, N Fk	39.1150	99.9709	39.2563	100.3771	15	GP	E	O	X	X	X	X	X	X
Saline R, N Fk	39.1599	100.7132	39.2173	101.0596	17	GP	E	O	X	X	X	X	X	X
Saline R, S Fk	39.1599	100.7132	39.2268	101.3663	18	GP	E	O	X	X	X	X	X	X
Salt Cr	38.9594	98.8822	38.9694	99.0734	20	GP	E			X				
Spring Brook Cr	39.1625	100.4592	39.2310	100.6340	21	GP	E	O						
Spring Cr, East	39.0902	99.3460	39.2282	99.4536	10	GP	E							
Sweetwater Cr	39.0622	99.0960	39.0186	99.1881	29	GP	E							
Tomcat Cr	39.0902	99.5002	39.2256	99.5292	28	GP	E	O						
Trego Cr	39.0794	99.4861	39.0441	99.6735	19	GP	E							
Trego Cr	39.0986	99.8543	39.0598	100.0103	24	GP	E	O						
Unnamed Stream	39.0789	100.1171	39.0754	100.2417	1061	GP	E							
Unnamed Stream	39.1135	99.7044	39.2314	99.8672	13	GP	E							
Wild Horse Cr	39.1130	99.5435	39.2499	99.5783	27	GP	E							
SUBBASIN: LOWER SALINE (HUC 10260010)														
Bacon Cr	39.1098	98.3366	39.2884	98.3975	7	GP	E			X				
Blue Stem Cr	39.0264	98.4773	39.0022	98.5973	33	GP	E							
Bullfoot Cr	39.0082	98.1363	38.9919	98.2078	14	GP	E	X		X				
Bullfoot Cr	38.9919	98.2078	38.9025	98.3492	15	GP	E	X		X				
Coon Cr	39.1052	98.6788	39.2200	98.7292	31	GP	E							
Dry Cr	38.8612	97.6302	38.7417	97.6245	29	GP	E							
Eff Cr	38.8753	97.7933	38.8170	97.9007	23	GP	E			X				
Elkhorn Cr	39.0140	98.0896	38.8377	98.1809	17	GP	E			X				
Elkhorn Cr , West	38.9574	98.1018	38.8436	98.2000	38	GP	E							
Fourmile Cr	39.0889	98.6268	39.2215	98.6399	30	GP	E							
Lost Cr	39.0355	98.1565	39.1222	98.1669	34	GP	E							
Mulberry Cr	38.8389	97.7044	38.8753	97.7933	21	GP	E	X						
Mulberry Cr	38.8753	97.7933	38.7894	98.0289	22	GP	E	X						
Owl Cr	38.9736	97.8290	38.8867	98.0048	18	GP	E							
Owl Cr	38.9939	97.9642	38.8830	98.0181	39	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SMOKY/SALINE RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER SALINE (HUC 10260010)														
Ralston Cr	38.7626	97.8023	38.6297	97.8446	28	GP	E							
Saline R	38.8575	97.5062	38.8919	97.6022	1	GP	E	X	X	X	X	X	X	X
Saline R	39.0036	98.4285	38.9667	98.4973	13	GP	E	X	X	X	X	X	X	X
Saline R	38.8919	97.6022	38.9736	97.8290	2	GP	E	X	X	X	X	X	X	X
Saline R	38.9736	97.8290	39.0140	98.0896	3	GP	E	X	X	X	X	X	X	X
Saline R	39.0140	98.0896	39.0082	98.1363	4	GP	E	X	X	X	X	X	X	X
Saline R	39.0082	98.1363	39.0284	98.2066	5	GP	E	X	X	X	X	X	X	X
Saline R	39.0284	98.2066	39.0036	98.4285	9	GP	E	X	X	X	X	X	X	X
Shaw Cr	38.9571	97.7720	38.9202	97.8047	41	GP	E							
Spillman Cr	39.0284	98.2066	39.1098	98.3366	6	GP	E			X				
Spillman Cr, N Br	39.1098	98.3366	39.2362	98.5000	8	GP	E			X				
Spring Cr	38.9919	98.2078	38.8498	98.2076	16	GP	E			X				
Spring Cr	38.8919	97.6022	38.8612	97.6302	19	GP	E			X				
Spring Cr	38.8612	97.6302	38.8389	97.7044	20	GP	E			X				
Spring Cr	38.8389	97.7044	38.7658	97.7990	24	GP	E							
Spring Cr	38.7658	97.7990	38.7626	97.8023	26	GP	E							
Spring Cr	38.7626	97.8023	38.6346	97.8789	27	GP	E							
Spring Cr, West	38.7658	97.7990	38.7631	97.9948	25	GP	E							
Table Rock Cr	38.8634	97.9488	38.8091	98.0313	40	GP	E							
Trail Cr	39.0767	98.2735	39.2043	98.3054	32	GP	E							
Twelvemile Cr	39.0134	98.0119	39.0776	98.0550	36	GP	E							
Twin Cr, West	38.9919	98.3772	38.9004	98.4179	37	GP	E							
Wolf Cr	39.0036	98.4285	39.0494	98.5148	10	GP	E			X				
Wolf Cr, E Fk	39.0494	98.5148	39.2390	98.6166	11	GP	E			X				
Wolf Cr, W Fk	39.0494	98.5148	39.1753	98.8267	12	GP	E			X				
Yauger Cr	39.0269	98.1480	39.1050	98.1494	35	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SOLOMON RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER NORTH FORK SOLOMON (HUC 10260011)														
Ash Cr	39.6570	99.4013	39.7758	99.4861	24	GP	E							
Beaver Cr	39.6719	99.5615	39.8053	99.5991	23	GP	E							
Big Timber Cr	39.6428	99.7275	39.7839	99.7912	8	GP	E			X				
Bow Cr	39.6098	99.1834	39.4500	100.2266	15	GP	E			X				
Bow Cr	39.4500	100.2266	39.4553	100.4107	16	GP	E	O		X				
Bow Cr , South	39.4500	100.2266	39.3878	100.7199	17	GP	E	O						
Cactus Cr	39.6569	99.5762	39.7997	99.7030	28	GP	E							
Crooked Cr	39.6624	99.5509	39.8151	99.6812	6	GP	E							
Elk Cr	39.6136	99.9951	39.6631	100.2283	12	GP	E							
Elk Cr, East	39.6205	99.9207	39.7253	99.9969	25	GP	E							
Game Cr	39.6219	99.8047	39.7606	99.8373	10	GP	E							
Game Cr	39.6589	99.8253	39.7526	99.8300	27	GP	E							
Lost Cr	39.6089	99.9834	39.5344	100.0156	20	GP	E							
Sand Cr	39.6388	99.7477	39.7282	99.8191	26	GP	E							
Scull Cr	39.6471	99.6564	39.7762	99.7445	21	GP	E							
Solomon R, N Fk	39.6219	99.8047	39.6136	99.9951	11	GP	E	X	X	X	X	X	X	X
Solomon R, N Fk	39.6136	99.9951	39.2810	101.2812	13	GP	E	X	X	X	X	X	X	X
Solomon R, N Fk	39.6759	99.2380	39.6624	99.5509	5	GP	E	X	X	X	X	X	X	X
Solomon R, N Fk	39.6624	99.5509	39.6428	99.7275	7	GP	E	X	X	X	X	X	X	X
Solomon R, N Fk	39.6428	99.7275	39.6219	99.8047	9	GP	E	X	X	X	X	X	X	X
Spring Cr	39.5823	100.1553	39.5220	100.1338	19	GP	E							
Wolf Cr	39.6650	99.4719	39.7947	99.5532	22	GP	E							
SUBBASIN: LOWER NORTH FORK SOLOMON (HUC 10260012)														
Beaver Cr	39.6464	98.8597	39.7485	98.8430	10	GP	E			X				
Beaver Cr, E Br	39.7485	98.8430	39.9526	98.8079	11	GP	E			X				
Beaver Cr, Middle	39.7485	98.8430	39.7509	98.8523	12	GP	E							
Beaver Cr, Middle	39.7509	98.8523	39.9707	98.9748	13	GP	E							
Beaver Cr, West	39.7509	98.8523	39.9585	98.9972	14	GP	E			X				
Big Cr	39.7185	99.1856	39.9243	99.2714	26	GP	E							
Boughton Cr	39.7748	99.4070	39.9010	99.4522	34	GP	E							
Buck Cr	39.6405	98.5237	39.6627	98.5996	43	GP	E							
Cedar Cr	39.6478	98.9053	39.6779	98.9489	16	GP	E							
Cedar Cr	39.6779	98.9489	39.7016	99.0045	18	GP	E							
Cedar Cr, East	39.6779	98.9489	39.9344	99.0089	17	GP	E			X				
Cedar Cr, East	39.8803	99.0556	39.9711	99.0564	37	GP	E							
Cedar Cr, Middle	39.7016	99.0045	39.9478	99.1348	19	GP	E							
Cedar Cr, West	39.7016	99.0045	39.9385	99.1861	20	GP	E							
Deer Cr	39.6656	99.0989	39.6961	99.1393	23	GP	E			X				
Deer Cr	39.6961	99.1393	39.7185	99.1856	25	GP	E			X				
Deer Cr	39.7185	99.1856	39.7250	99.2500	27	GP	E			X				
Deer Cr	39.7250	99.2500	39.7332	99.3278	29	GP	E	O	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SOLOMON RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER NORTH FORK SOLOMON (HUC 10260012)														
Deer Cr	39.7332	99.3278	39.8209	99.6385	31	GP	E			X				
Dry Cr	39.6040	98.7951	39.7562	98.7090	42	GP	E			X				
Glen Rock Cr	39.6396	98.9376	39.5595	98.9647	41	GP	E							
Lawrence Cr	39.5701	98.7370	39.5417	98.8796	44	GP	E							
Lindley Cr	39.5591	98.7045	39.6496	98.6959	45	GP	E							
Little Oak Cr	39.5411	98.4806	39.7403	98.4924	3	GP	E							
Medicine Cr	39.6510	99.0248	39.5506	99.1346	33	GP	E							
Oak Cr	39.5004	98.4624	39.5411	98.4806	2	GP	E		X	X				
Oak Cr	39.5411	98.4806	39.8811	98.6940	4	GP	E			X				
Oak Cr , West	39.7192	98.5917	39.8570	98.6922	39	GP	E							
Oak Cr, East	39.6799	98.5497	39.8362	98.5478	40	GP	E			X				
Plotner Cr	39.7332	99.3278	39.9118	99.3803	30	GP	E	O	O	X	X	O	X	X
Plum Cr	39.6961	99.1393	39.9276	99.2542	24	GP	E							
Solomon R, N Fk	39.6464	98.8597	39.6478	98.9053	15	GP	E	X	X	X	X	X	X	X
Solomon R, N Fk	39.6478	98.9053	39.6510	99.0248	21	GP	E	X	X	X	X	X	X	X
Solomon R, N Fk	39.6510	99.0248	39.6604	99.1031	22	GP	E	X	X	X	X	X	X	X
Solomon R, N Fk	39.4990	98.5072	39.5181	98.6039	5	GP	E	X	X	X	X	X	X	X
Solomon R, N Fk	39.5181	98.6039	39.6028	98.8164	7	GP	E	X	X	X	X	X	X	X
Solomon R, N Fk	39.6028	98.8164	39.6464	98.8597	9	GP	E	X	X	X	X	X	X	X
Spring Cr	39.7250	99.2500	39.9154	99.3327	28	GP	E			X				
Spring Cr	39.6028	98.8164	39.9023	98.7156	8	GP	E			X				
Starvation Cr	39.8040	99.4625	39.8996	99.4897	38	GP	E							
Twelvemile Cr	39.5181	98.6039	39.7258	98.6986	6	GP	E							
SUBBASIN: UPPER SOUTH FORK SOLOMON (HUC 10260013)														
Antelope Cr	39.3529	100.0777	39.4196	100.2347	13	GP	E	O						
Coon Cr	39.3667	99.7854	39.4826	99.9230	8	GP	E	O						
Foster Cr	39.3498	100.2143	39.4077	100.2381	19	GP	E	O						
Jackson Branch	39.3483	99.8499	39.2656	100.1316	17	GP	E	O						
Jackson Branch	39.2929	99.9079	39.2513	100.0342	24	GP	E	O						
Martin Cr, South	39.3501	100.2610	39.2784	100.3112	23	GP	E	O						
Rock Cr	39.3545	99.9759	39.4505	100.0265	22	GP	E	O						
Sand Cr	39.3483	99.8957	39.4631	100.0000	11	GP	E	O						
Sand Cr	39.3416	100.3180	39.3417	100.8340	15	GP	E	O						
Sand Cr	39.3568	99.6365	39.2422	99.6645	27	GP	E	O						
Skunk Cr	39.3633	99.7748	39.2663	99.8271	26	GP	E	O						
Slate Cr	39.4003	99.5207	39.4884	99.5774	25	GP	E	O						
Solomon R, S Fk	39.3483	99.8499	39.3483	99.8957	10	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.3483	99.8957	39.3529	100.0777	12	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.3529	100.0777	39.3416	100.3180	14	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.3416	100.3180	39.2457	101.4451	16	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.3867	99.5089	39.3782	99.6140	4	GP	E	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SOLOMON RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER SOUTH FORK SOLOMON (HUC 10260013)														
Solomon R, S Fk	39.3782	99.6140	39.3691	99.7002	6	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.3691	99.7002	39.3667	99.7854	7	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.3667	99.7854	39.3483	99.8499	9	GP	E	X	X	X	X	X	X	X
Spring Cr	39.3782	99.6140	39.4869	99.8532	5	GP	E							
Spring Cr	39.3690	99.5423	39.2454	99.5594	817	GP	E							
Storer Cr	39.3502	100.1761	39.3979	100.2133	20	GP	E	O						
Wildhorse Cr	39.3691	99.7002	39.2491	99.7908	18	GP	E	O						
Youngs Cr	39.3531	100.0067	39.4517	100.0536	21	GP	E	O						
SUBBASIN: LOWER SOUTH FORK SOLOMON (HUC 10260014)														
Ash Cr	39.4127	99.3556	39.5218	99.4441	22	GP	E							
Boxelder Cr	39.4196	99.3097	39.2520	99.3096	14	GP	E							
Carr Cr	39.4261	98.4542	39.2422	98.6122	21	GP	E		X	X				
Cocklebur Cr	39.4327	99.3183	39.5085	99.3577	23	GP	E							
Covert Cr	39.4276	98.7055	39.2524	98.8979	19	GP	E			X				
Crooked Cr	39.4594	98.9364	39.5423	99.0282	27	GP	E							
Dibble Cr	39.4294	99.2821	39.5150	99.3552	363	GP	E							
Elm Cr	39.4367	99.2320	39.2463	99.2562	15	GP	E							
Jim Cr	39.4318	99.1847	39.5257	99.2212	25	GP	E							
Kill Cr	39.4337	98.7791	39.2727	99.0000	18	GP	E			X				
Kill Cr, East	39.4010	98.7978	39.2942	98.8874	28	GP	E							
Lost Cr	39.3976	99.3928	39.2455	99.5331	13	GP	E							
Lucky Cr	39.4410	99.0138	39.3349	99.0693	26	GP	E							
Medicine Cr	39.4316	99.1377	39.2659	99.1803	16	GP	E							
Medicine Cr	39.4526	98.8331	39.2895	99.0652	17	GP	E							
Robbers Roost Cr	39.4166	99.2785	39.2856	99.2968	24	GP	E							
Sand Cr	39.4018	99.4011	39.5292	99.5810	395	GP	E							
Solomon R, S Fk	39.3976	99.3928	39.4018	99.4011	10	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.4207	98.5016	39.4264	98.5389	2	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.4264	98.5389	39.4276	98.7055	3	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.4276	98.7055	39.4337	98.7791	4	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.4337	98.7791	39.4526	98.8331	5	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.4526	98.8331	39.4316	99.1377	6	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.4316	99.1377	39.4367	99.2320	7	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.4018	99.4011	39.4032	99.4228	798	GP	E	X	X		X	X	X	X
Solomon R, S Fk	39.4367	99.2320	39.4127	99.3556	8	GP	E	X	X	X	X	X	X	X
Solomon R, S Fk	39.4196	99.3097	39.3976	99.3928	9	GP	E	X	X	X	X	X	X	X
Twin Cr	39.4264	98.5389	39.2394	98.7590	20	GP	E			X				
Twin Cr, East	39.4134	98.5543	39.3184	98.5781	29	GP	E							
SUBBASIN: SOLOMON RIVER (HUC 10260015)														
Antelope Cr	39.3273	98.2496	39.3808	98.3121	43	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SOLOMON RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: SOLOMON RIVER (HUC 10260015)														
Antelope Cr	39.0283	97.6243	39.0107	97.6951	58	GP	E							
Battle Cr	39.2010	98.0797	39.1207	98.2161	33	GP	E			X				
Battle Cr	39.0592	97.6728	39.0425	97.7356	57	GP	E			X				
Brown Cr	39.4685	98.1662	39.7199	98.2426	15	GP	E			X				
Coal Cr	38.9827	97.4947	39.2165	97.4918	2	GP	E							
Cow Cr	39.1482	97.8980	39.2831	97.9235	28	GP	E							
Cow Cr	39.1760	97.9105	39.2635	97.8824	55	GP	E							
Cris Cr	39.3382	97.8350	39.4633	97.7945	48	GP	E							
Disappointment Cr	39.5540	98.3237	39.6315	98.2929	35	GP	E							
Dry Cr	39.4527	98.0559	39.5294	98.0143	37	GP	E							
Dry Cr	39.2457	97.7606	39.2981	97.6610	52	GP	E							
Elkhorn Cr , West	39.1633	97.9901	39.0903	98.0674	47	GP	E							
Elm Cr	39.6625	98.3436	39.8100	98.2598	59	GP	E							
Fifth Cr	39.2375	98.0842	39.3445	98.1067	45	GP	E							
Fourth Cr	39.3882	97.9866	39.3116	98.0012	46	GP	E							
Frog Cr	39.4839	98.2836	39.5540	98.2734	34	GP	E							
Granite Cr	39.5297	98.3787	39.6243	98.4237	24	GP	E							
Indian Cr	39.4483	98.1538	39.3907	98.2142	40	GP	E							
Leban Cr	39.4349	98.1080	39.3807	98.2270	41	GP	E							
Limestone Cr	39.4794	98.2985	39.6118	98.3429	18	GP	E	X	X	X	X	X	X	X
Limestone Cr	39.6118	98.3429	39.8387	98.2864	19	GP	E	X	X	X	X	X	X	X
Limestone Cr, Middle	39.6258	98.3560	39.8270	98.3940	21	GP	E		X	X	X	X	X	X
Limestone Cr, West	39.6118	98.3429	39.6258	98.3560	20	GP	E		X	X	X	X	X	X
Limestone Cr, West	39.6258	98.3560	39.8406	98.4499	22	GP	E		X	X	X	X	X	X
Lindsey Cr	39.0989	97.6944	39.2586	97.4973	7	GP	E							
Little Cr	39.2793	98.2035	39.2958	98.3226	44	GP	E							
Lost Cr	39.1247	97.7586	39.2472	97.8675	56	GP	E							
Marshall Cr	39.4040	98.0288	39.3439	98.0830	42	GP	E							
Mill Cr	39.4526	98.4092	39.3557	98.3993	38	GP	E							
Mortimer Cr	39.2933	97.7955	39.4397	97.7634	49	GP	E			X				
Mulberry Cr	39.4563	98.1258	39.5929	98.1687	36	GP	E							
Pipe Cr	39.2204	97.6337	39.4292	97.5985	10	GP	E			X				
Pipe Cr	39.1214	97.7121	39.2204	97.6337	9	GP	E			X				
Pipe Cr , West	39.2204	97.6337	39.4240	97.6072	11	GP	E			X				
Plum Cr	39.4341	98.0686	39.6066	98.1640	13	GP	E			X				
Rattlesnake Cr	39.1936	98.0433	39.2010	98.0797	31	GP	E			X				
Rattlesnake Cr	39.2010	98.0797	39.2041	98.2871	32	GP	E			X				
Salt Cr	39.0722	97.6814	39.1482	97.8980	27	GP	E	X		X				
Salt Cr	39.1482	97.8980	39.1936	98.0433	29	GP	E	X		X				
Salt Cr	39.1936	98.0433	39.2942	98.4139	30	GP	E	X		X				
Sand Cr	39.0156	97.6034	39.1835	97.5173	4	GP	E							
Second Cr	39.3584	97.8907	39.2788	97.9733	51	GP	E							
Second Cr	39.1537	97.9362	39.2742	97.9755	54	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

SOLOMON RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: SOLOMON RIVER (HUC 10260015)														
Solomon R	38.9039	97.3695	38.9827	97.4947	1	GP	E	X	X	X	X	X	X	X
Solomon R	39.1214	97.7121	39.4341	98.0686	12	GP	E	X	X	X	X	X	X	X
Solomon R	39.4341	98.0686	39.4685	98.1662	14	GP	E	X	X	X	X	X	X	X
Solomon R	39.4685	98.1662	39.4794	98.2985	16	GP	E	X	X	X	X	X	X	X
Solomon R	39.4794	98.2985	39.4743	98.3144	23	GP	E	X	X	X	X	X	X	X
Solomon R	38.9827	97.4947	39.0156	97.6034	3	GP	E	X	X	X	X	X	X	X
Solomon R	39.0156	97.6034	39.0722	97.6814	5	GP	E	X	X	X	X	X	X	X
Solomon R	39.0722	97.6814	39.0989	97.6944	6	GP	E	X	X	X	X	X	X	X
Solomon R	39.0989	97.6944	39.1214	97.7121	8	GP	E	X	X	X	X	X	X	X
Spring Cr	39.1474	97.9230	39.0732	97.9939	53	GP	E							
Turkey Cr	39.4567	98.2105	39.3869	98.2686	39	GP	E							
Walnut Cr	39.4536	98.3476	39.3391	98.4074	26	GP	E			X				
Yockey Cr	39.2805	97.7913	39.4079	97.7214	50	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued).

UPPER ARKANSAS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: MIDDLE ARKANSAS-LAKE MCKINNEY HUC (11030001)														
Amazon Ditch	38.0237	101.1841	37.8999	101.4474	15	GP	E	O						
Arkansas R	37.9258	100.7866	37.9704	101.1264	1	GP	S	X	X	X	X	X	X	X
Arkansas R	37.9704	101.1264	37.9433	101.6556	3	GP	S	X	X	X	X	X	X	X
Arkansas R	37.9433	101.6556	37.9949	101.8744	5	GP	S	X	X	X	X	X	X	X
Arkansas R	37.9949	101.8744	38.0152	101.9652	7	GP	S	X	X	X	X	X	X	X
Arkansas R	38.0152	101.9652	38.0273	102.0343	9	GP	S	X	X	X	X	X	X	X
Bridge Cr, East	38.0134	101.9105	38.2029	101.9188	6	GP	E	O						
Bridge Cr, West	38.0331	101.9657	38.1837	101.9669	8	GP	E	O						
Fort Aubrey Ditch	37.9661	101.6749	37.9929	101.8353	17	GP	S	X	X	X	X	X	X	X
Frontier Ditch	37.9949	101.8744	38.0284	102.0343	16	GP	S	X	X	X	X	X	X	X
Great Eastern Ditch	37.9821	101.1900	38.0625	100.9932	2	GP	E							
James Draw	38.1128	101.1262	38.2846	101.5931	10	GP	E	O						
Mattox Draw	37.9821	101.1900	38.1899	101.4894	11	GP	E	O						
Sand Cr	37.9377	101.2855	37.9781	101.3827	13	GP	E	O						
Sand Cr	37.8941	101.4359	37.9812	101.4691	14	GP	E	O						
Shirley Cr	37.9661	101.6749	38.1529	101.8069	4	GP	E	O						
Unnamed Stream	37.9704	101.1264	37.9821	101.1900	18	GP	E	O						
SUBBASIN: WHITEWOMAN (HUC 11030002)														
Sand Cr	38.3350	101.0972	38.3758	101.4814	3	GP	E	O						
Whitewoman Cr	38.4379	100.8974	38.3350	101.0972	1	GP	E	O						
Whitewoman Cr	38.3350	101.0972	38.5859	102.0446	2	GP	E	O						
SUBBASIN: ARKANSAS-DODGECITY (HUC 11030003)														
Arkansas R	37.7366	99.9856	37.9231	100.7790	1	GP	E	O	X	X	X	X	X	X
SUBBASIN: ARKANSAS-PICKEREL (HUC 110300004)														
Arkansas R	38.2192	98.3556	38.3544	98.6825	1	GP	S	O	X	X	X	X	X	X
Arkansas R	38.0688	99.2397	37.6579	99.7583	10	GP	E	O	X	X	X	X	X	X
Arkansas R	37.6579	99.7583	37.7680	99.9885	11	GP	E	O	X	X	X	X	X	X
Arkansas R	38.3544	98.6825	38.2545	98.9435	2	GP	E	O	X	X	X	X	X	X
Arkansas R	38.2545	98.9435	38.2111	98.9816	4	GP	E	O	X	X	X	X	X	X
Arkansas R	38.2111	98.9816	38.1684	99.0953	5	GP	E	O	X	X	X	X	X	X
Arkansas R	38.1684	99.0953	38.0688	99.2397	6	GP	E	O	X	X	X	X	X	X
Ash Cr	38.2545	98.9435	38.3436	99.3367	3	GP	E	O						
Coon Cr	38.0688	99.2397	37.9516	99.3823	7	GP	E	O		X				
Coon Cr	37.9516	99.3823	37.7450	99.9118	9	GP	E	O		X				
Cow Cr	37.7666	99.6100	37.8437	99.7611	14	GP	E	O						
Little Coon Cr	37.9516	99.3823	37.8451	99.7056	8	GP	E	O						
Mulberry Cr	37.6579	99.7583	37.6127	100.2417	12	GP	E	O						
Pickerel Cr	38.2111	98.9816	38.0021	99.1742	13	GP	E	O						

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

UPPER ARKANSAS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: ARKANSAS-PICKEREL (HUC 110300004)														
White Woman Cr	37.9204	99.5821	37.8612	99.7468	15	GP	E	O						
SUBBASIN: PAWNEE (HUC 11030005)														
Cocklebur Cr	38.1852	99.3200	38.3626	99.4168	12	GP	E	O						
Cottonwood Cr	38.2360	99.9745	38.1224	100.0417	10	GP	E	O						
Cottonwood Cr	38.1842	100.1429	38.2459	100.3364	8	GP	E	O						
Hackberry Cr	38.2108	100.1033	38.3193	100.5153	4	GP	E	O						
Pawnee R	38.1684	99.0953	38.1690	99.1592	1	GP	E	X	X	X	X	X	X	X
Pawnee R	38.1690	99.1592	38.1837	99.5608	2	GP	E	O	X	X	X	X	X	X
Pawnee R	38.1832	99.5640	38.2108	100.1033	3	GP	E	O	X	X	X	X	X	X
Pawnee R	38.2108	100.1033	37.9658	100.5974	5	GP	E	O	X	X	X	X	X	X
Plum Cr	38.2333	100.0443	38.3668	100.2114	7	GP	E	O						
Sand Cr	38.2504	99.6825	38.2213	99.8352	11	GP	E	O						
Sand Cr	38.1627	100.1619	38.0000	100.3150	9	GP	E	O						
Sawmill Cr	38.1690	99.1592	38.0545	99.6007	6	GP	E	O						
SUBBASIN: BUCKNER (HUC 11030006)														
Buckner Cr	38.1837	99.5608	38.1251	99.6937	1	GP	E	O	O	X	X	O	O	O
Buckner Cr	38.1251	99.6937	37.9244	100.4003	2	GP	E	O	O	X	X	O	O	O
Buckner Cr, S Fk	37.9523	100.1953	37.8373	100.2801	6	GP	E							
Duck Cr	37.9026	99.9417	37.7951	100.1005	8	GP	E							
Elm Cr	37.9011	99.8844	37.7518	99.9342	5	GP	E							
Rock Cr	38.0862	99.7869	38.0014	99.8887	9	GP	E							
Saw Log Cr	38.1251	99.6937	37.9011	99.8844	3	GP	E							
Saw Log Cr	37.9011	99.8844	37.8240	100.2133	4	GP	E							
Spring Cr	38.0677	99.9458	37.9596	100.0742	7	GP	E	O						
SUBBASIN: UPPER WALNUT CREEK (HUC 11030007)														
Darr Cr	38.4312	100.2093	38.4137	100.3610	12	GP	E	O						
Walnut Cr, Long Branch	38.4252	99.8856	38.6088	99.9356	2	GP	E	O	X	X	X	X	X	X
Walnut Cr, Middle Fk	38.5382	100.1381	38.5288	100.3795	7	GP	E	O	X	X	X	X	X	X
Walnut Cr, Middle Fk	38.5288	100.3795	38.5257	100.6749	9	GP	E	O	X	X	X	X	X	X
Walnut Cr, N Fk	38.4096	99.8792	38.4252	99.8856	1	GP	E	O	X	X	X	X	X	X
Walnut Cr, N Fk	38.4252	99.8856	38.4795	99.9833	3	GP	E	O	X	X	X	X	X	X
Walnut Cr, N Fk	38.4795	99.9833	38.5382	100.1381	5	GP	E	O	X	X	X	X	X	X
Walnut Cr, N Fk	38.5382	100.1381	38.6151	100.4024	6	GP	E	O	X	X	X	X	X	X
Walnut Cr, N Fk of M Fk	38.5288	100.3795	38.5806	100.6619	8	GP	E	O	X	X	X	X	X	X
Walnut Cr, S Fk	38.4096	99.8792	38.3629	100.6072	10	GP	E	O	X	X	X	X	X	X
Wild Horse Cr	38.5565	100.2390	38.6316	100.3457	11	GP	E	O						
Wild Horse Cr	38.4795	99.9833	38.6379	99.9953	4	GP	E	O						

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

UPPER ARKANSAS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER WALNUT CREEK (HUC 11030008)														
Alexander Dry Cr	38.4723	99.5842	38.6481	99.7981	7	GP	E							
Bazine Cr	38.4359	99.6889	38.6197	99.9544	9	GP	E							
Boot Cr	38.4507	98.9618	38.5505	99.0508	15	GP	E							
Dry Cr	38.4606	99.0172	38.4006	99.1657	14	GP	E							
Dry Walnut Cr	38.3783	98.7344	38.3680	99.2417	13	GP	E			X				
Otter Cr	38.4540	99.2869	38.3753	99.4009	12	GP	E							
Sand Cr	38.4846	99.1396	38.5683	99.4129	3	GP	E							
Sandy Cr	38.4743	99.3911	38.3535	99.4436	11	GP	E							
Walnut Cr	38.3544	98.6825	38.3783	98.7344	1	GP	E		X	X	X	X	X	X
Walnut Cr	38.4359	99.6889	38.4096	99.8792	10	GP	E		X	X	X	X	X	X
Walnut Cr	38.3783	98.7344	38.4846	99.1396	2	GP	E		X	X	X	X	X	X
Walnut Cr	38.4846	99.1396	38.4540	99.2869	4	GP	E		X	X	X	X	X	X
Walnut Cr	38.4540	99.2869	38.4743	99.3911	5	GP	E		X	X	X	X	X	X
Walnut Cr	38.4743	99.3911	38.4723	99.5842	6	GP	E		X	X	X	X	X	X
Walnut Cr	38.4723	99.5842	38.4359	99.6889	8	GP	E		X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

UPPER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: ARIKAREE (HUC 10250001)														
Arikaree R	40.0031	102.0134	39.9779	102.0514	1	GP	S	X	X	X	X	X	X	X
SUBBASIN: SOUTH FORK REPUBLICAN (HUC 10250003)														
Battle Cr	39.6965	101.9382	39.5897	102.0497	71	GP	E							
Big Timber Cr	40.0027	101.5329	39.7799	101.5774	61	GP	E							
Bluff Cr	39.8969	101.7025	39.7937	101.6561	70	GP	E	O						
Cherry Cr	39.7868	101.8053	39.7650	102.0507	5	GP	E	O						
Cowpe Cr	39.6724	102.0159	39.7191	102.0504	8	GP	E	O						
Crosby Cr	39.7019	101.9344	39.6091	101.8974	72	GP	E	O						
Delay Cr	39.9323	101.6592	39.8539	101.6295	66	GP	E	O						
Drury Cr	39.7525	101.8428	39.6642	101.8640	60	GP	E							
Hackberry Cr	39.9100	101.7038	39.8931	101.9807	3	GP	E	O						
Republican R, S Fk	40.0027	101.5565	39.8969	101.7025	2	GP	S	X	X	X	X	X	X	X
Republican R, S Fk	39.8969	101.7025	39.7803	101.8061	4	GP	S	X	X	X	X	X	X	X
Republican R, S Fk	39.7868	101.8053	39.7525	101.8428	6	GP	S	X	X	X	X	X	X	X
Republican R, S Fk	39.7525	101.8428	39.6724	102.0159	7	GP	S	X	X	X	X	X	X	X
Republican R, S Fk	39.6724	102.0159	39.6570	102.0500	9	GP	S	X	X	X	X	X	X	X
Sand Cr	39.8129	101.7769	39.6930	101.7314	68	GP	E	O						
Spring Cr	39.8189	101.7747	39.8729	101.8542	67	GP	E	O						
Valley Cr	39.8448	101.7473	39.7620	101.6937	69	GP	E	O						
SUBBASIN: UPPER REPUBLICAN (HUC 10250004)														
Driftwood Cr	40.0024	101.1763	39.9153	101.3081	59	GP	E	O						
Jones Canyon	40.0026	101.4833	39.9999	101.4824	50	GP	E	O						
SUBBASIN: UPPER SAPPA (HUC 10250010)														
Sappa Cr, M Fk	39.7847	100.5779	39.6899	100.8455	1	GP	E	O	X	X	X	X	X	X
Sappa Cr, M Fk	39.6899	100.8455	39.2807	101.8335	3	GP	E	O	X	X	X	X	X	X
Sappa Cr, N Fk	39.6899	100.8455	39.5761	101.2979	2	GP	E	O	X	X	X	X	X	X
Sappa Cr, S Fk	39.7847	100.5779	39.3781	101.2758	4	GP	E	O	X	X	X	X	X	X
Sappa Cr, S Fk	39.3781	101.2758	39.2565	101.7016	6	GP	E	O	X	X	X	X	X	X
Unnamed Stream	39.3781	101.2758	39.3116	101.6836	5	GP	E	O						
SUBBASIN: LOWER SAPPA (HUC 10250011)														
Boy Cr	39.9892	100.0026	39.8972	99.9821	13	GP	E	O						
Cotton Cr	39.8651	100.4443	39.8222	100.4282	15	GP	E	O						
Deer Cr	40.0016	99.8845	39.9411	99.8729	7	GP	E	O						
Dry Cr	40.0015	99.8650	39.9592	99.8565	8	GP	E	O						
Dutch Cr	40.0017	99.9406	39.9343	99.9252	16	GP	E	O						
Jones Cr	40.0016	99.9841	39.9176	99.9481	17	GP	E	O						
Maple Cr	40.0019	99.7209	39.9796	99.7143	18	GP	E	O						

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

UPPER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: LOWER SAPPA (HUC 10250011)														
Rock Branch	39.9859	100.0790	39.8844	100.0657	10	GP	E	O						
Sappa Cr	40.0017	99.9923	39.9738	100.1438	3	GP	E	O	X	X	X	X	X	X
Sappa Cr	39.9738	100.1438	39.7847	100.5779	4	GP	E	O	X	X	X	X	X	X
Sappa Cr, Long Branch	39.9738	100.1438	39.8323	100.3179	5	GP	E	O	X	X	X	X	X	X
Sheep Cr	40.0019	99.6863	39.9926	99.6823	19	GP	E	O						
Spring Branch	39.9549	100.2409	39.8915	100.2402	9	GP	E	O						
Squaw Branch	39.9849	100.0525	39.9332	100.0583	12	GP	E	O						
Walnut Cr	39.9864	100.0246	39.8859	100.0288	11	GP	E	O						
SUBBASIN: SOUTH FORK BEAVER (HUC 10250012)														
Beaver Cr	39.8185	101.0337	39.4433	101.6872	1	GP	E	O	X	X	X	X	X	X
Beaver Cr, Middle	39.4433	101.6872	39.3169	102.0407	2	GP	E	O	X	X	X	X	X	X
Beaver Cr, Middle	39.3169	102.0407	39.3067	102.0481	8	GP	E	O	X	X	X	X	X	X
Beaver Cr, N Fk	39.3169	102.0407	39.3235	102.0481	3	GP	E	O	X	X	X	X	X	X
Beaver Cr, South	39.3233	101.8459	39.2530	102.0476	11	GP	E	O	X	X	X	X	X	X
Beaver Cr, South	39.4433	101.6872	39.3233	101.8459	9	GP	E	O	X	X	X	X	X	X
Unnamed Stream	39.3233	101.8459	39.2740	102.0480	10	GP	E	O						
SUBBASIN: LITTLE BEAVER (HUC 10250013)														
Beaver Cr, North	39.8290	101.1154	39.8069	101.3906	2	GP	E	O	X	X	X	X	X	X
Little Beaver Cr	39.8223	101.0303	39.8290	101.1154	1	GP	E	O	X	X	X	X	X	X
Little Beaver Cr	39.8290	101.1154	39.5734	101.8209	3	GP	E	O	X	X	X	X	X	X
Little Beaver Cr	39.5734	101.8209	39.5217	102.0491	4	GP	E	O						
Sand Cr	39.5734	101.8209	39.4432	102.0488	7	GP	E	O						
SUBBASIN: BEAVER (HUC 10250014)														
Beaver Cr	40.0019	100.5376	39.8223	101.0303	2	GP	E		X	X	X	X	X	X
Elm Cr	40.0021	100.8053	39.9928	100.8037	64	GP	E	O						
SUBBASIN: PRAIRIE DOG (HUC 10250015)														
Battle Cr	39.9774	99.4815	39.9073	99.4848	24	GP	E	O						
Big Timber Cr	39.7145	100.2424	39.7349	100.4945	9	GP	E	O						
Buffalo Cr	39.8663	99.7476	39.8230	99.6485	21	GP	E	O	X	X				
Dry Cr	40.0018	99.3892	39.9213	99.4035	23	GP	E	O						
Elk Cr	39.9318	99.5808	40.0000	99.6713	3	GP	E	O	X	X				
Fancy Cr	39.9198	99.6538	39.9870	99.6965	19	GP	E	O	X	X				
Horse Cr	39.8915	99.6957	39.9862	99.7535	18	GP	E	O	X	X				
Jack Cr	39.9960	99.4182	39.8922	99.4657	22	GP	E	O						
Plum Cr	39.7426	100.1755	39.8197	100.2984	14	GP	E	O						
Prairie Dog Cr	39.7145	100.2424	39.6350	100.5167	10	GP	E	X	X	X	X	X	X	X
Prairie Dog Cr	39.6350	100.5167	39.3127	101.3053	12	GP	E	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

UPPER REPUBLICAN RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: PRAIRIE DOG (HUC 10250015)														
Prairie Dog Cr	40.0020	99.5006	39.9058	99.6852	2	GP	E	X	X	X	X	X	X	X
Prairie Dog Cr	39.8663	99.7476	39.7992	99.9266	4	GP	E	X	X	X	X	X	X	X
Prairie Dog Cr	39.7782	100.0280	39.7145	100.2424	8	GP	E	X	X	X	X	X	X	X
Prairie Dog Cr, N Fk	39.6350	100.5167	39.5376	100.8455	11	GP	E	O	X	X	X	X	X	X
Prairie Dog Cr, N Fk	39.8850	99.7154	39.9812	99.7729	17	GP	E	O	X	X	X	X	X	X
Robinson Cr	39.8209	99.8897	39.9320	99.9321	16	GP	E	O						
Sand Cr	39.9058	99.6852	39.9536	99.7050	20	GP	E	O	X					
Spring Cr	39.8413	99.8419	39.9285	99.9034	15	GP	E	O						
Walnut Cr	40.0021	99.3473	39.9161	99.3382	13	GP	E	O						
Walnut Cr	39.8442	99.8104	39.7740	99.8126	25	GP	E	O						
Wildcat Cr	39.8455	99.7772	39.7852	99.7457	26	GP	E	O	X					

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued).

VERDIGRIS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER VERDIGRIS (HUC 11070101)														
Bachelor Cr	37.8380	96.1007	37.9696	96.3286	21	GP	E		X	X				
Bernard Cr	37.9096	96.1747	37.9706	96.2198	24	GP	E		X	X				
Big Cedar Cr	37.5091	95.6659	37.6215	95.5332	39	GP	E							
Brazil Cr	37.8444	95.9636	37.9124	95.9008	31	GP	E							
Buffalo Cr	37.6352	95.7517	37.7868	95.5904	2	GP	E			X				
Buffalo Cr, West	37.6813	95.7336	37.7963	95.7590	34	GP	E			X				
Cedar Cr	37.8671	95.9416	37.9148	95.8846	32	GP	E			X				
Chetopa Cr	37.4367	95.6685	37.5852	95.5127	22	GP	E			X				
Crooked Cr	37.5858	95.7140	37.6240	95.6180	38	GP	E							
Dry Cr	37.8559	95.9761	37.9888	95.9227	27	GP	E							
Elder Branch	37.6443	95.7469	37.6754	95.6017	37	GP	E							
Fancy Cr	37.8020	96.0350	37.7570	96.0688	28	GP	E		X					
Greenhall Cr	37.9892	96.0229	38.0426	95.9629	26	GP	E							
Holderman Cr	38.1229	96.0976	38.1121	96.1984	47	GP	E		X					
Homer Cr	37.8380	96.1007	37.9904	96.2752	20	GP	E		X	X				
Kelly Branch	38.1483	96.1554	38.2183	96.1658	42	GP	E							
Kuntz Branch	37.8180	96.0696	37.7600	96.0821	29	GP	E							
Little Chetopa Cr	37.4826	95.5823	37.4951	95.4736	471	GP	E							
Little Sandy Cr	37.6821	95.8345	37.7628	95.7971	33	GP	E							
Long Cr	38.0644	96.0497	38.1371	95.9774	45	GP	E							
Miller Cr	37.8098	95.9640	37.8393	95.8735	30	GP	E							
Moon Branch	38.1683	96.1946	38.2507	96.2632	43	GP	E							
Onion Cr	37.9999	96.1424	38.0553	96.2138	23	GP	E							
Rock Cr	38.1636	96.2100	38.2859	96.3309	14	GP	E			X				
Ross Branch	37.6885	95.8755	37.6958	96.0101	35	GP	E							
Sandy Cr	37.6761	95.8370	37.8993	95.8422	4	GP	E			X				
Shaw Cr	38.1801	96.2810	38.2640	96.3719	40	GP	E							
Slate Cr	37.9731	96.1096	38.0599	96.3100	25	GP	E			X				
Snake Cr	37.6168	95.7649	37.6093	95.8714	36	GP	E			X				
Tate Branch Cr	38.1491	96.1266	38.2119	96.1194	44	GP	E							
Van Horn Cr	38.0575	96.0507	38.0636	96.1297	46	GP	E							
Verdigris R	37.4009	95.6644	37.6352	95.7517	1	GP	S	X	X	X	X	X	X	X
Verdigris R	37.8222	95.9689	37.8857	96.0072	11	GP	S	X	X	X	X	X	X	X
Verdigris R	37.8857	96.0072	38.1523	96.1665	12	GP	S	X	X	X	X	X	X	X
Verdigris R	37.6352	95.7517	37.6761	95.8370	3	GP	S	X	X	X	X	X	X	X
Verdigris R	37.6761	95.8370	37.7409	95.9318	5	GP	S	X	X	X	X	X	X	X
Verdigris R, Bernard Br	38.1523	96.1665	38.0914	96.3458	16	GP	E		X	X	X	X	X	X
Verdigris R, N Br	38.1523	96.1665	38.1636	96.2100	13	GP	E		X	X	X	X	X	X
Verdigris R, N Br	38.1636	96.2100	38.0900	96.3579	15	GP	E		X	X	X	X	X	X
Walnut Cr	37.7874	95.9944	37.8380	96.1007	19	GP	E			X				
West Cr	37.8857	96.0072	38.0952	96.2785	17	GP	E			X				
Wolf Cr	38.1882	96.3134	38.2287	96.4014	41	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

VERDIGRIS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: FALL (HUC 11070102)														
Battle Cr	37.9883	96.5086	38.0231	96.5448	18	GP	E							
Burnt Cr	37.7878	96.4124	37.8574	96.4727	24	GP	E							
Clear Cr	37.5016	95.8253	37.5188	95.7410	37	GP	E	O	X	X	X	X	X	X
Coon Cr	37.8704	96.3965	37.8532	96.4639	25	GP	E							
Coon Cr	37.5576	95.9395	37.5103	95.9959	36	GP	E							
Crain Cr	37.6325	96.0499	37.6993	96.0298	32	GP	E							
Fall R	37.4009	95.6644	37.5770	95.9573	1	EX	S	X	X	X	X	X	X	X
Fall R	37.5915	95.9609	37.6132	96.0374	2	EX	S	X	X	X	X	X	X	X
Fall R	37.6132	96.0374	37.6396	96.0645	3	EX	S	X	X	X	X	X	X	X
Fall R	37.6821	96.1123	37.7190	96.1606	7	EX	S	X	X	X	X	X	X	X
Fall R	37.7190	96.1606	37.8080	96.2890	8	EX	S	X	X	X	X	X	X	X
Fall R	37.8080	96.2890	37.8568	96.3573	9	EX	S	X	X	X	X	X	X	X
Fall R, E Br	37.8568	96.3573	38.0812	96.4065	635	EX	S	X	X	X	X	X	X	X
Fall R, W Br	37.8568	96.3573	38.0156	96.4816	11	EX	S	X	X	X	X	X	X	X
Honey Cr	37.7210	96.1973	37.7513	96.3349	26	GP	E			X				
Indian Cr	37.5770	95.9573	37.5783	96.1732	15	GP	E			X				
Ivanpah Cr	37.9016	96.4466	37.8847	96.5764	19	GP	E			X				
Kitty Cr	37.7831	96.3423	37.7534	96.4002	27	GP	E							
Little Indian Cr	37.5416	96.0716	37.4947	96.0991	34	GP	E							
Little Salt Cr	37.6160	96.0618	37.5858	96.1230	35	GP	E							
Oleson Cr	37.9508	96.3921	38.0244	96.4415	21	GP	E							
Otis Cr	37.9213	96.4595	38.0284	96.4609	20	GP	E		X					
Otter Cr	37.7190	96.1606	37.6182	96.5155	13	EX	E	X	X	X	X	X	X	X
Otter Cr, S Br	37.6849	96.3024	37.6182	96.4435	28	GP	S	X	X	X	X	X	X	X
Plum Cr	37.6071	96.1999	37.6578	96.2676	30	GP	E							
Rainbow Cr, East	37.5101	95.8620	37.4631	95.9758	17	GP	E							
Salt Cr	37.6132	96.0374	37.6545	96.2731	14	GP	E			X				
Salt Cr	37.5118	95.8416	37.6047	95.8746	38	GP	E			X				
Silver Cr	37.5915	95.9609	37.6362	95.9592	33	GP	E							
Snake Cr	37.7055	96.2160	37.6657	96.2387	31	GP	E							
Spring Cr	37.8080	96.2890	37.7030	96.5143	12	GP	E							
Swing Cr	37.9662	96.3843	38.0162	96.3066	989	GP	E							
Tadpole Cr	37.7014	96.2738	37.7405	96.3781	29	GP	E			X				
Watson Branch	37.6915	96.3815	37.7595	96.4042	23	GP	E							
SUBBASIN: MIDDLE VERDIGRIS (HUC 11070103)														
Big Cr	36.9993	95.3279	37.0255	95.3137	21	GP	E							
Big Hill Cr	37.0853	95.6064	37.1058	95.5943	30	GP	E	X	X	X	X	X	X	X
Big Hill Cr	37.1058	95.5943	37.4631	95.4537	32	GP	E	X	X	X	X	X	X	X
Biscuit Cr	37.0503	95.7086	37.0978	95.6896	53	GP	E							
Bluff Run	37.0738	95.7380	37.1147	95.7156	54	GP	E							
Choteau Cr	37.2857	95.6634	37.3572	95.5989	63	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued).

VERDIGRIS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: MIDDLE VERDIGRIS (HUC 11070103)														
Claymore Cr	37.0551	95.5911	37.1509	95.5030	50	GP	E			X				
Deadman Cr	37.0559	95.7233	37.0041	95.7818	57	GP	E							
Deer Cr	37.0726	95.5067	37.0524	95.3602	51	GP	E			X				
Drum Cr	37.1961	95.6309	37.4444	95.5000	34	GP	E			X				
Dry Cr	37.3891	95.6622	37.4521	95.5132	37	GP	E			X				
Fawn Cr	37.0798	95.7468	37.0037	95.7951	56	GP	E							
Mud Cr	37.1666	95.4518	37.2292	95.4420	59	GP	E							
Onion Cr	36.9994	95.5981	37.1760	95.9010	39	GP	S			X				
Potatoe Cr	37.1058	95.5943	37.1988	95.5062	31	GP	E			X				
Prior Cr	37.3449	95.6843	37.3607	95.6196	62	GP	E							
Pumpkin Cr	37.0370	95.5848	37.2917	95.3943	28	GP	E			X				
Richland Cr	37.1229	95.4643	37.1511	95.3260	49	GP	E							
Rock Cr	37.2119	95.6729	37.1557	95.7392	58	GP	E							
Rock Cr	37.3844	95.5188	37.3787	95.4729	61	GP	E							
Snow Cr	36.9993	95.5146	37.0310	95.3435	25	GP	E			X				
Spring Cr	37.0959	95.7642	37.0615	95.8185	55	GP	E							
Sycamore Cr	37.0293	95.6527	37.1040	95.6772	52	GP	E							
Verdigris R	36.9994	95.5888	37.0370	95.5848	27	GP	S	X	X	X	X	X	X	X
Verdigris R	37.0370	95.5848	37.0853	95.6064	29	GP	S	X	X	X	X	X	X	X
Verdigris R	37.0853	95.6064	37.1961	95.6309	33	GP	S	X	X	X	X	X	X	X
Verdigris R	37.1961	95.6309	37.2256	95.6809	35	GP	S	X	X	X	X	X	X	X
Verdigris R	37.2256	95.6809	37.3891	95.6622	36	GP	S	X	X	X	X	X	X	X
Verdigris R	37.3891	95.6622	37.3976	95.6633	38	GP	S	X	X	X	X	X	X	X
Wildcat Cr	37.2482	95.4768	37.2975	95.4183	60	GP	E							
SUBBASIN: ELK (HUC 11070104)														
Bachelor Cr	37.3124	95.9698	37.3871	95.9436	25	GP	E							
Bloody Run	37.3351	96.0111	37.3427	96.0718	26	GP	E							
Bull Cr	37.4734	96.3443	37.4360	96.4073	33	GP	E							
Card Cr	37.2534	95.8531	37.2063	95.9393	19	GP	E							
Chetopa Cr	37.2340	95.8109	37.2088	95.8486	18	GP	E							
Clear Cr	37.3621	96.1486	37.3083	96.2142	30	GP	E							
Clear Cr	37.4874	96.3602	37.4909	96.4668	32	GP	E							
Coffey Branch	37.2739	96.0114	37.2432	96.0716	20	GP	E							
Duck Cr	37.2960	95.9165	37.4579	95.9545	3	GP	E			X				
Elk R	37.2606	95.6904	37.2660	95.9198	1	GP	E	X	X	X	X	X	X	X
Elk R	37.4209	96.2164	37.4522	96.2324	10	GP	E	X	X	X	X	X	X	X
Elk R	37.4522	96.2324	37.4538	96.2725	12	GP	E	X	X	X	X	X	X	X
Elk R	37.4538	96.2725	37.6077	96.5258	14	GP	E	X	X	X	X	X	X	X
Elk R	37.2660	95.9198	37.2960	95.9165	2	GP	E	X	X	X	X	X	X	X
Elk R	37.2960	95.9165	37.3763	96.0437	4	GP	E	X	X	X	X	X	X	X
Elk R	37.3763	96.0437	37.3785	96.0634	6	GP	E	X	X	X	X	X	X	X

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

VERDIGRIS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: ELK (HUC 11070104)														
Elk R	37.3785	96.0634	37.3708	96.1716	8	GP	E	X	X	X	X	X	X	X
Elk R	37.3708	96.1716	37.4209	96.2164	9	GP	E	X	X	X	X	X	X	X
Elk R, Mound Br	37.4209	96.2164	37.4319	96.4096	15	GP	E		X	X	X	X	X	X
Elk R, S Br	37.5098	96.4016	37.5423	96.4985	38	GP	E		X	X	X	X	X	X
Elm Branch	37.3744	95.8710	37.4195	95.8331	23	GP	E							
Hickory Cr	37.3534	96.0190	37.4383	95.9828	28	GP	E							
Hitchen Cr	37.3785	96.0634	37.5171	96.1517	7	GP	E			X				
Hitchen Cr, East	37.4540	96.1513	37.4962	96.1093	35	GP	E							
Little Duck Cr	37.3238	95.8877	37.3714	95.9268	24	GP	E							
Little Hitchen Cr	37.4216	96.1535	37.4606	96.1070	37	GP	E							
Painterhood Cr	37.3763	96.0437	37.5180	96.0403	5	GP	E			X				
Painterhood Cr, East	37.4271	96.0495	37.5017	95.9843	36	GP	E							
Pan Cr	37.2961	96.0805	37.3440	96.1026	27	GP	E							
Pawpaw Cr	37.4522	96.2324	37.6097	96.3085	11	GP	E							
Racket Cr	37.2824	95.7807	37.3497	95.7847	21	GP	E			X				
Rock Cr	37.4538	96.2725	37.6049	96.3418	13	GP	E			X				
Rowe Branch Elk R	37.5481	96.4414	37.5833	96.4087	39	GP	E		X	X	X	X	X	X
Salt Cr	37.2660	95.9198	37.3116	96.1862	17	GP	E			X				
Salt Cr, South	37.2956	96.0930	37.3146	96.1694	29	GP	E							
Skull Cr	37.4161	96.3599	37.3952	96.3785	31	GP	E							
Snake Cr	37.4739	96.2468	37.5643	96.2469	34	GP	E							
Sycamore Cr	37.2790	95.7445	37.4200	95.7950	22	GP	E			X				
Wildcat Cr	37.3708	96.1716	37.3813	96.3757	16	GP	E		X					
SUBBASIN: CANEY (HUC 11070106)														
Bachelor Cr	37.1965	96.1477	37.2678	96.1078	47	GP	E							
Bee Cr	37.0537	95.9701	37.2331	95.9989	9	GP	E			X				
California Cr	37.1723	95.9895	37.2156	96.0383	48	GP	E							
Caney Cr	37.1074	96.0529	37.3322	96.3679	12	GP	E		X	X	X	X	X	X
Caney Cr, North	37.1074	96.0529	37.3200	96.2552	11	GP	E		X	X	X	X	X	X
Caney R	36.9991	96.2849	37.1555	96.4940	19	EX	S	X	X	X	X	X	X	X
Caney R	37.1555	96.4940	37.4816	96.4672	20	EX	S	X	X	X	X	X	X	X
Caney R, E Fk	37.3610	96.4667	37.4473	96.4221	52	GP	E		X	X	X	X	X	X
Cedar Cr	37.0755	96.4653	37.1525	96.6145	30	GP	E			X				
Cedar Cr	36.9992	96.2395	37.1168	96.2946	32	GP	E			X				
Cheyenne Cr	37.0196	95.9539	37.1310	95.8701	40	GP	E			X				
Coon Cr	36.9991	96.2255	37.0368	96.1912	36	GP	E							
Corum Cr	37.3351	96.4521	37.4095	96.4092	51	GP	E							
Cotton Cr	37.0732	95.9527	37.1171	95.8913	38	GP	E							
Cotton Cr, N Fk	36.9991	95.8666	37.0101	95.8665	37	GP	E							
Dry Cr	37.0520	96.4379	37.1082	96.4381	29	GP	E							
Fly Cr	37.1529	96.1092	37.2266	96.0620	46	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

VERDIGRIS RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: CANEY (HUC 11070106)														
Hafer Run	37.0398	95.9195	37.0541	95.8157	509	GP	E							
Illinois Cr	37.1076	95.9509	37.1998	95.9330	39	GP	E							
Jim Cr	37.2057	96.5609	37.2427	96.6146	49	GP	E							
Lake Cr	37.0347	95.9636	37.0349	96.0486	34	GP	E							
Little Caney Cr	37.0537	95.9701	37.1074	96.0529	10	GP	E	X						
Little Caney Cr	36.9991	95.9537	37.0537	95.9701	8	GP	E	X	X					
Otter Cr	37.1555	96.4940	37.3318	96.5375	21	EX	E	X	X	X	X	X	X	X
Otter Cr	37.0871	96.1072	37.0636	96.1722	33	GP	E		X	X	X	X	X	X
Pool Cr	37.1470	96.2660	37.1829	96.3557	43	GP	E							
Possum Trot Cr	37.0272	96.4137	36.9993	96.4502	74	GP	E							
Rock Cr	37.0419	96.4263	37.0484	96.6576	28	GP	E			X				
Spring Cr	37.1669	96.2744	37.2952	96.2793	44	GP	E							
Spring Cr	37.2720	96.4621	37.3549	96.5258	53	GP	E							
Squaw Cr	37.2366	96.4618	37.2715	96.4185	42	GP	E							
Sycamore Cr	37.0235	96.3513	37.1415	96.3415	31	GP	E							
Turkey Cr	37.2136	96.1760	37.2298	96.2353	45	GP	E							
Union Cr	37.1977	96.4923	37.2936	96.5254	41	GP	E							
Wolf Cr	37.1085	96.1536	37.1835	96.1848	35	GP	E							
Wolf Cr	37.2588	96.4636	37.3741	96.3839	50	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters (continued)

WALNUT RIVER BASIN

STREAM SEGMENT NAME	LATITUDE/LONGITUDE LOWER		LATITUDE/LONGITUDE UPPER		SEG	CLASS	AL	PCR	DWS	FP	GR	IWS	IR	LW
SUBBASIN: UPPER WALNUT RIVER (HUC 11030017)														
Badger Cr	37.7384	97.0078	37.7735	97.0770	36	GP	E		X					
Bemis Cr	37.8504	96.7327	37.8856	96.5870	8	GP	E		X					
Bird Cr	37.8285	96.8169	37.8130	96.6472	213	GP	E							
Coke Cr	37.9387	96.7856	38.0789	96.7543	15	GP	E							
Constant Cr	37.7965	96.8627	37.8407	96.9240	41	GP	E							
Dry Cr	37.6745	97.0006	37.7721	97.2232	27	GP	E							
Dry Cr	37.9273	97.0425	38.0414	97.1325	32	GP	E							
Durechen Cr	37.9202	96.7532	38.0125	96.5597	12	GP	E		X	X				
Elm Cr	37.6828	96.9928	37.7876	96.9514	43	GP	E		X					
Fourmile Cr	37.8862	97.0496	37.9879	96.9122	20	GP	E			X				
Gilmore Branch	37.9455	96.7851	37.9775	96.8192	39	GP	E		X					
Gypsum Cr	37.9284	97.1515	38.0132	97.2499	30	GP	E							
Henry Cr	37.9850	97.0276	38.1149	97.1061	33	GP	E			X				
Lower Branch	37.8513	96.7174	37.8324	96.5677	42	GP	E		X					
Prairie Cr	37.8419	97.1149	37.8646	97.2397	35	GP	E							
Rock Cr	37.8532	97.0379	37.9335	96.9418	37	GP	E							
Sand Cr	37.9021	97.1907	37.9071	97.2491	29	GP	E							
Satchel Cr	37.8800	96.7500	37.9058	96.5766	10	GP	E		X	X				
School Branch	38.0061	96.7234	38.0829	96.7070	45	GP	E		X					
Sutton Cr	37.7544	96.8795	37.8188	96.9316	40	GP	E							
Walnut Cr	38.0283	97.1968	38.0639	97.2642	44	GP	E							
Walnut R	37.6495	96.9911	37.6564	96.9904	1	GP	E	X	X	X	X	X	X	X
Walnut R	37.9427	96.7589	38.0215	96.5533	14	GP	E	X	X	X	X	X	X	X
Walnut R	37.6564	96.9904	37.8171	96.8394	2	GP	E	X	X	X	X	X	X	X
Walnut R	37.8171	96.8394	37.8368	96.8108	3	GP	E	X	X	X	X	X	X	X
Walnut R, W Br	37.8171	96.8394	38.0559	96.8621	16	GP	E	X	X	X	X	X	X	X
Whitewater Cr	37.8278	97.0955	37.8052	97.2310	34	GP	E							
Whitewater Cr, E Br	37.9682	97.1571	38.1006	97.1893	31	GP	E			X				
Whitewater R	37.6564	96.9904	37.6745	97.0006	17	GP	E	X	X	X	X	X	X	X
Whitewater R	37.6745	97.0006	37.8140	97.0218	18	GP	E	X	X	X	X	X	X	X
Whitewater R	37.8140	97.0218	37.8862	97.0496	19	GP	E	X	X	X	X	X	X	X
Whitewater R	37.8862	97.0496	37.9812	97.0235	21	GP	E	X	X	X	X	X	X	X
Whitewater R	37.9812	97.0235	38.1116	97.0840	23	GP	E	X	X	X	X	X	X	X
Whitewater R, E Br	37.9812	97.0235	38.1034	96.9043	22	GP	E		X	X	X	X	X	X
Whitewater R, W Br	37.8140	97.0218	37.8530	97.1195	24	GP	E		X	X	X	X	X	X
Whitewater R, W Br	37.8530	97.1195	38.1249	97.2369	25	GP	E		X	X	X	X	X	X
Wildcat Cr	37.8530	97.1195	38.0000	97.2562	26	GP	E							
Wildcat Cr, West	37.9267	97.2171	37.9797	97.2643	28	GP	E							
SUBBASIN: LOWER WALNUT RIVER (HUC 11030018)														
Black Crook Cr	37.2197	96.9802	37.2668	96.9279	18	GP	E							
Cedar Cr	37.3016	96.9572	37.3254	96.8115	19	GP	E							

Designated uses of major classified streams and streams constituting outstanding national resource waters

[redacted] RIVER BASIN

Designated uses of major classified lakes and lakes constituting outstanding national resource waters (continued)

CIMARRON RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: CROOKED CREEK (HUC 11040007)												
Lake Meade State Park/SFL	Meade	LM010601	L	GP	S	X		X	X			
Meade Co St Park W.A.	Meade	LM986289	W	GP	E			X	X			
SUBBASIN: NORTH FORK CIMARRON (HUC 1104003)												
Frazier Lake	Grant	LM060201	L	GP	E		O			O	O	O
SUBBASIN: UPPER CIMARRON (HUC 11040002)												
Moss Lake East	Morton	LM060301	L	EX	S		O	X		O	O	X
Moss Lake Middle	Morton	LM060401	L	EX	S	X	O	X		O	O	X
Moss Lake West	Morton	LM060501	L	EX	S		O	X		O	O	X
SUBBASIN: UPPER CIMARRON-BLUFF (HUC 11040008)												
Clark Co. SFL	Clark	LM010101	L	GP	S		X	X		X		
Lake Coldwater	Comanche	LM042601	L	GP	E	X	X	X		X		
St. Jacobs Well (Big Basin W.A.)	Clark	LM060001	L	EX	E		O	X	X	O	O	X
SUBBASIN: UPPER CIMARRON-LIBERAL (11040006)												
Russell Lake	Stevens	LM060101	L	GP	E		O			O	O	O

KANSAS/LOWER REPUBLICAN RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: DELAWARE (HUC 10270103)												
Atchison County Park Lake	Atchison	LM060601	L	GP	E			X				X
Banner Creek Lake	Jackson	LM032001	L	GP	E	X	X	X		X		
Elkhorn Lake	Jackson	LM061001	L	GP	E		O	X		O	O	O
Lake Jayhawk	Jefferson	LM039701	L	GP	E	X		X				
Little Lake	Brown	LM062601	L	GP	E		X	X		X	O	O
Mission Lake	Brown	LM013601	L	GP	E	X	X	X		X		
Muscotah Marsh	Atchison	LM985255	W	GP	E			X				
Nebo SFL	Jackson	LM061501	L	GP	E			X				
Perry Lake	Jefferson	LM029001	L	GP	S	X	X	X		X		
Perry W.A.	Jefferson	LM029041	W	GP	S			X				
Prairie Lake	Jackson	LM061901	L	GP	E	X	X	X		X		
Sabetha Watershed Pond (Niehues)	Nemaha	LM075101	L	GP	E	X	O	X		O	O	O
SUBBASIN: LOWER BIG BLUE (HUC 10270205)												
Centralia Lake	Nemaha	LM073701	L	GP	E	X		X				
Lake Idlewild	Marshall	LM061201	L	GP	E			X				
Rocky Ford W.A.	Riley	LM986173	L	GP	E			X				
Tuttle Creek Lake	Riley	LM021001	L	GP	E	X	X	X		X		
Tuttle Creek W.A.	Pottawatomie	LM986432	W	GP	E			X				
SUBBASIN: LOWER KANSAS (HUC 10270104)												
Baker Wetlands	Douglas	LM014401	W	GP	E			X				
Carbondale West Lake	Osage	LM060801	L	GP	E			X				
Cedar Lake	Johnson	LM061601	L	GP	E	X	X	X		X		
Clinton Lake	Douglas	LM030001	L	GP	S	X	X	X		X		
Douglas Co SFL	Douglas	LM011301	L	GP	E			X				
Frisco Lake	Johnson	LM065201	L	GP	E			X				
Gardner Lake	Johnson	LM040401	L	GP	E	X	X	X		X		
Lake Dabanawa	Jefferson	LM054001	L	GP	E	X		X				
Lake Quivera	Wyandotte	LM986104	L	GP	E	X		X				
Lakeview Estates Lake	Shawnee	LM075301	L	GP	E	X		X				
Leavenworth Co. SFL	Leavenworth	LM012301	L	GP	E			X				
Lenexa Lake	Johnson	LM062501	L	GP	E		O	X		O	O	O
Lone Star Lake	Douglas	LM011401	L	GP	E	X		X				
Mahaffie Farmstead Pond	Johnson	LM986142	L	GP	E		O	X		O	O	O
Mary's Lake	Douglas	LM061401	L	GP	E	X	O	X		O	O	O
New Olathe Lake	Johnson	LM061301	L	GP	E	X	X	X		X		
North Park Lake	Wyandotte	LM062701	L	GP	E		O	X		O	O	O
Oskaloosa Lake	Jefferson	LM061701	L	GP	E	X	X	X		X		
Pierson Park Lake	Wyandotte	LM061801	L	GP	E			X				
Potter's Lake	Douglas	LM073401	L	GP	E		O	X		O	O	O
Shawnee Mission Lake	Johnson	LM041801	L	GP	E	X		X				
Strowbridge Reservoir	Osage	LM051201	L	GP	E		X	X		X		
Sunflower Park Lake	Johnson	LM073601	L	GP	E		O	X		O	O	O
Waterworks Lakes	Johnson	LM062201	L	GP	E		X	X		X		
SUBBASIN: LOWER LITTLE BLUE (HUC 10270207)												
Washington Co SFL	Washington	LM010901	L	GP	E			X				
Washington W.A.	Washington	LM010941	W	GP	E			X				
SUBBASIN: LOWER REPUBLICAN (HUC 10250017)												
Belleville City Lake	Republic	LM060701	L	GP	E			X				
Jamestown W.A.	Cloud	LM052801	W	EX	E			X				
Lake Jewell	Jewell	LM062901	L	GP	E			X				

KANSAS/LOWER REPUBLICAN RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: LOWER REPUBLICAN (HUC 10250017)												
Milford Lake	Geary	LM019001	L	GP	E	X	X	X		X		
Milford W.A.	Clay/riley	LM986449	W	GP	E			X				
Rimrock Park Lake	Geary	LM070501	L	GP	E		O	X		O	O	O
Wakefield Lake	Clay	LM986210	L	GP	E			X				
SUBBASIN: MIDDLE KANSAS (HUC 10270102)												
Alma City Lake	Wabaunsee	LM050001	L	GP	E		X	X		X		X
Cedar Crest Pond	Shawnee	LM986234	L	GP	E		O			O	O	O
Central Park Lake	Shawnee	LM060901	L	GP	E		O	X		O	O	O
Dornwood Park Lake	Shawnee	LM062301	L	GP	E	O	O	O		O	O	O
Gage Park Lake	Shawnee	LM061101	L	GP	E			X				
Jeffrey Energy Center W.A.	Pottawatomie	LM039501	L	GP	E			X		X		
Lake Jivaro	Shawnee	LM075001	L	GP	E	X		X				
Lake Shawnee	Shawnee	LM012201	L	GP	E	X		X				
Lake Sherwood	Shawnee	LM986111	L	GP	E	X		X				
Myer's Pond	Shawnee	LM075201	L	GP	E	X	O	X		O	O	O
Pillsbury Crossing W.A.	Riley	LM986166	L	GP	E			X				
Pottawatomie Co SFL #1	Pottawatomie	LM012901	L	GP	E			X				
Pottawatomie Co SFL #2	Pottawatomie	LM013201	L	GP	E			X				
Shawnee Co. SFL	Shawnee	LM012501	L	GP	E			X				
Topeka Public Golf Course Lake	Shawnee	LM986203	L	GP	E	X	O	O		O		O
Wabaunsee Co Lake	Wabaunsee	LM042001	L	GP	E	X	X	X		X		
Wamego City Lake	Pottawatomie	LM062101	L	GP	E		O	X		O	O	O
Warren Park Lake	Shawnee	LM062001	L	GP	E	O	O	O		O	O	O
WREL Lake	Shawnee	LM043701	L	GP	E			X				
SUBBASIN: MIDDLE REPUBLICAN (HUC 10250016)												
Lovewell Lake	Jewell	LM015001	L	GP	E	X		X			X	
SUBBASIN: UPPER KANSAS (HUC 10270101)												
Ogden City Lake	Riley	LM011701	L	GP	E			X				

LOWER ARKANSAS RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: CHIKASKIA (HUC 11060005)												
Anthony City Lake	Harper	LM048801	L	GP	E	X		X				
Isabel W.A.	Pratt	LM014301	W	GP	E			X				
Wellington Lake	Sumner	LM042201	L	GP	E	X	X	X		X		
Wellington New City Lake	Sumner	LM986326	L	GP	E	X	X	X		X		
SUBBASIN: COW (HUC 11030011)												
Barton Lake	Barton	LM072701	L	GP	E			X				
Carey Park Lake	Reno	LM063001	L	GP	E	X		X				
Cheyenne Bottoms	Barton	LM050401	W	ON	S			X				
Dillon Park Lakes	Reno	LM063101	L	GP	E		O	X		O	O	O
Sterling City Lake	Rice	LM064801	L	GP	E			X				
SUBBASIN: KAW LAKE (HUC 11060001)												
Cowley Co SFL	Cowley	LM013401	L	GP	E			X				
Kaw W.A.	Cowley	LM986401	W	GP	E			X				
SUBBASIN: LITTLE ARKANSAS (HUC 11030012)												
Harvey County Camp Hawk Lake	Harvey	LM063401	L	GP	E	X	O	X		O	O	O
Harvey County West Park Lake	Harvey	LM049001	L	GP	E	X		X	X			
Inman Lake	Mcpherson	LM986043	L	GP	E	O	O			O		
Mcpherson Wetlands	Mcpherson	LM986456	W	GP	E			X				
Mingenback Lake	Mcpherson	LM064701	L	GP	E		O	X		O	O	O
Newton City Park Lake	Harvey	LM064201	L	GP	E			X				
SUBBASIN: LOWER SALT FORK (HUC 11060004)												
Hargis Lake	Barber	LM063301	L	GP	E			X				
SUBBASIN: MEDICINE LODGE (HUC 11060003)												
Barber Co. SFL	Barber	LM013101	L	GP	E			X				
SUBBASIN: MIDDLE ARKANSAS-SLATE (HUC 11030013)												
Belaire Lake	Sedgwick	LM985927	L	GP	E			X				
Buffalo Park Lake	Sedgwick	LM985934	L	GP	E			X				
Cadillac Lake (Pracht Wetland)	Sedgwick	LM054101	W	GP	E	O	O			O	O	O
Chisholm Creek Park Lake	Sedgwick	LM064601	L	GP	E	X	O	X		O	O	O
Emery Park Lake	Sedgwick	LM986005	L	GP	E			X				
Harrison Park Lake	Sedgwick	LM986333	L	GP	E			X				
Horseshoe Lake	Sedgwick	LM063501	L	GP	E			X	X			
Kid's Pond	Sedgwick	LM063601	L	GP	E			X	X			
Moss Lake	Sedgwick	LM064101	L	GP	E			X	X			
Riggs Park Lake	Sedgwick	LM986340	L	GP	E			X				
Slate Creek W.A.	Sumner	LM014201	W	GP	E			X				
Vic's Lake	Sedgwick	LM064301	L	GP	E			X	X			
Watson Park Lake	Sedgwick	LM064401	L	GP	E	X		X				
Windmill Lake	Sedgwick	LM064501	L	GP	E			X	X			
SUBBASIN: NINNESCAH (HUC 11030016)												
Lake Afton	Sedgwick	LM049201	L	GP	E	X		X				
SUBBASIN: NORTH FORK NINNESCAH (HUC 11030014)												
Cheney Lake	Reno	LM017001	L	GP	E	X	X	X		X		
SUBBASIN: RATTLESNAKE (HUC 11030009)												
Kiowa Co SFL	Kiowa	LM042801	L	GP	E			X				

Designated uses of major classified lakes and lakes constituting outstanding national resource waters (continued)

LOWER ARKANSAS RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: RATTLESNAKE (HUC 11030009)												
Quivera Big Salt Marsh	Stafford	LM050601	W	ON	S			X				
Quivera Little Salt Marsh	Stafford	LM050201	W	ON	S			X				
SUBBASIN: SOUTH FORK NINNESCAH (HUC 11030015)												
Kingman Co SFL	Kingman	LM010401	L	GP	E			X				
Kingman SFL Wetland	Kingman	LM010441	W	GP	E			X				
Kingman W.A. (fish channel)	Kingman	LM063701	W	GP	E			X				
KWP Hatchery and Ponds	Pratt	LM986074	L	GP	E	O	O	O		O	O	O
Lemon Park Lake	Pratt	LM063901	L	GP	E			X				
Pratt County Lake	Pratt	LM064001	L	GP	E	X		X				
Texas Lake W.A.	Pratt	LM053001	W	EX	E			X				

MARAIS DES CYGNES RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: UPPER MARAIS DES CYGNES (HUC 10290101)												
Allen City Lake	Lyon	LM047001	L	GP	E		X	X		X		
Cedar Creek Lake	Anderson	LM040701	L	GP	E		X	X		X		
Crystal Lake	Anderson	LM064901	L	GP	E		X	X		X		
Garnett North Lake	Anderson	LM040601	L	GP	E	X	X	X		X		
Harveyville Lake	Wabaunsee	LM040801	L	GP	E	X	X	X		X		
Hole In The Rock	Douglas	LM986036	L	GP	E	X	O	O	X	O	O	O
Lebo City Lake	Coffey	LM041201	L	GP	E		X	X		X		
Lebo City Park Lake	Coffey	LM065601	L	GP	E		O	X		O	O	O
Lyndon City Lake	Osage	LM065901	L	GP	E	X	X	X		X		X
Lyon Co SFL	Lyon	LM010501	L	GP	E			X				
Melvern Lake	Osage	LM027001	L	GP	E	X	X	X		X		
Melvern W.A.	Osage	LM986487	W	GP	E			X				
Osage City Reservoir	Osage	LM066101	L	GP	E		X	X		X		
Osage Co. SFL	Osage	LM012401	L	GP	E			X				
Pomona Lake	Osage	LM028001	L	GP	E	X	X	X		X		
Richmond City Lake	Franklin	LM046801	L	GP	E	X	X	X		X		
Scranton City Lake	Osage	LM986180	L	GP	E	X		X				
Spring Creek Park Lake	Douglas	LM066801	L	GP	E	X		X				
Westphalia Lake	Anderson	LM066901	L	GP	E		X	X		X		
SUBBASIN: LITTLE OSAGE (HUC 10290103)												
Blue Mound City Lake	Linn	LM046401	L	GP	E		X	X		X		
Prescott City Lake	Linn	LM066601	L	GP	E	X	X	X		X		
SUBBASIN: LOWER MARAIS DES CYGNES (HUC 10290102)												
Edgerton City Lake	Johnson	LM065001	L	GP	E		X	X		X		
Hillsdale Lake	Miami	LM035001	L	GP	S	X	X	X		X		
La Cygne Lake	Linn	LM044002	L	GP	E			X		X		
Louisburg Old Lake	Miami	LM065701	L	GP	E	X	X	X		X		
Louisburg SFL	Miami	LM043801	L	GP	E		X	X		X		
Marais Des Cygnes NWR	Linn	LM986395	W	EX	S			X				
Marais Des Cygnes W.A.	Linn	LM053201	W	EX	S			X				
Miami Co SFL	Miami	LM043601	L	GP	E			X				
Miola Lake	Miami	LM051001	L	GP	E	X	X	X		X		
Mound City Lake	Linn	LM051401	L	GP	E	X	X	X		X		
Osawatomie City Lake	Miami	LM066201	L	GP	E	X	X	X		X		
Paola City Lake	Miami	LM073201	L	GP	E			X				
Parker City Lake	Linn	LM066301	L	GP	E		X	X		X		
Pleasanton Lake #1	Linn	LM066401	L	GP	E		X	X		X		
Pleasanton Lake #2	Linn	LM066501	L	GP	E		X	X		X		
Pleasanton Reservoir	Linn	LM044201	L	GP	E	X	X	X		X		
Spring Hill City Lake	Johnson	LM073501	L	GP	E		X	X		X		
SUBBASIN: MARMATON (HUC 10290104)												
Bone Creek Lake	Crawford	LM043901	L	GP	E	X	X	X		X		
Bourbon Co. SFL	Bourbon	LM013301	L	GP	E			X				
Bronson City Lake	Bourbon	LM046201	L	GP	E		X	X		X		
Elm Creek Lake	Bourbon	LM044801	L	GP	E	X		X				
Fort Scott City Lake	Bourbon	LM045001	L	GP	E	X	X	X		X		
Frisco Lake	Crawford	LM068501	L	GP	E			X				
Gunn Park East Lake	Bourbon	LM065401	L	GP	E		O	X		O	O	O
Gunn Park West Lake	Bourbon	LM065501	L	GP	E		O	X		O	O	O
Lake Crawford State Park #2	Crawford	LM011101	L	GP	E	X		X				
Mulberry City Park Lake	Crawford	LM066001	L	GP	E		O	X		O	O	O

Designated uses of major classified lakes and lakes constituting outstanding national resource waters (continued)

MARAIS DES CYGNES RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: MARMATON (HUC 10290104)												
Rock Creek Lake	Bourbon	LM045201	L	GP	E			X				X

MISSOURI RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: INDEPENDENCE-SUGAR (HUC 10240011)												
Atchison City Lake	Atchison	LM985910	L	GP	E			X				
Atchison Co. SFL	Atchison	LM012601	L	GP	E			X				
Big Eleven Lake	Wyandotte	LM067101	L	GP	E		O	X		O	O	O
Jerry's Lake	Leavenworth	LM067801	L	GP	E		O	X		O	O	O
Lansing City Lake	Leavenworth	LM067201	L	GP	E		O	X		O	O	O
Merrit Lake	Leavenworth	LM985279	L	GP	E			X				
Smith Lake	Leavenworth	LM985286	L	GP	E			X				
Troy Fair Lake	Doniphan	LM073801	L	GP	E			X				
Wyandotte Co Lake	Wyandotte	LM042401	L	GP	E	X		X				
SUBBASIN: LOWER MISSOURI-CROOKED (HUC 10300101)												
Antioch Park Lake	Johnson	LM067701	L	GP	E	X	O	X		O	O	O
Heritage Park Lake	Johnson	LM062401	L	GP	E	X		X				
Nagiwika	Johnson	LM067901	W	GP	E			X				
Prairie View Park Lake	Johnson	LM067401	L	GP	E		O	X		O	O	O
South Park Lake	Johnson	LM067501	L	GP	E			X				
Stanley Rwd#2 Lake	Johnson	LM985996	L	GP	E		X	X		X		
Stohl Park Lake	Johnson	LM062801	L	GP	E		O	X		O	O	O
SUBBASIN: SOUTH FORK BIG NEMAHA (HUC 10240007)												
Nemaha Co SFL/W.A.	Nemaha	LM010801	W	GP	E			X				
Pony Creek Lake	Nemaha	LM073001	L	GP	E		X	X		X		
Sabetha City Lake	Nemaha	LM011501	L	GP	E		X	X		X		
SUBBASIN: TARKIO-WOLF (HUC 10240005)												
Brown Co SFL	Brown	LM010301	L	GP	E			X				
Hiawatha City Lake	Brown	LM011601	L	GP	E		X	X		X		

NEOSHO RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: LOWER COTTONWOOD (HUC 11070203)												
Chase County SFL	Chase	LM010201	L	GP	E	X		X				
Jones Park Pond	Lyon	LM068701	L	GP	E	X	O	X		O	O	O
Peter Pan Pond	Lyon	LM068901	L	GP	E		O	X		O	O	O
SUBBASIN: MIDDLE NEOSHO (HUC 11070205)												
Altamont City Main Lake	Labette	LM068001	L	GP	E			X				
Altamont City North Lake	Labette	LM068101	L	GP	E	X		X				
Altamont City West Lake	Labette	LM068201	L	GP	E	X		X				
Bartlett City Lake	Labette	LM045401	L	GP	E		X	X		X		
Harmon W.A.	Labette	LM986029	L	GP	E			X				
Mined Land Lake No. 42 Wetland	Cherokee	LM038841	W	GP	E			X				
Mined Land Lakes Area	Cherokee	LM048201	L	GP	E			X				
Neosho Co SFL	Neosho	LM044601	L	GP	E			X				
Neosho W.A.	Neosho	LM053401	W	GP	S			X				
Parsons Lake	Neosho	LM041401	L	GP	E	X	X	X		X		
Timber Lake	Neosho	LM069101	L	GP	E		X	X		X		
SUBBASIN: NEOSHO HEADWATERS (HUC 11070201)												
Council Grove City Lake	Morris	LM043001	L	GP	E	X	X	X		X		
Council Grove Lake	Morris	LM022001	L	GP	E	X	X	X		X		
Flint Hills NWR	Coffey	LM986463	W	ON	E			X				
John Redmond Lake	Coffey	LM026001	L	GP	E	X		X		X		
John Redmond W.A.	Coffey	LM986494	W	GP	E			X				
Lake Kahola	Chase	LM043401	L	GP	E	X	X	X		X		
SUBBASIN: SPRING (HUC 11070207)												
Empire Lake	Cherokee	LM074101	L	GP	E			X		X		
Frontenac City Lake	Crawford	LM068601	L	GP	E			X				
Mined Land Lakes Area	Crawford	LM047601	L	GP	E			X				
Pittsburg College Lake	Crawford	LM073301	L	GP	E		O	X		O	O	O
Playter's Lake	Crawford	LM069001	L	GP	E		O	X		O	O	O
SUBBASIN: UPPER COTTONWOOD (HUC 11070202)												
Hillsboro City Pond	Marion	LM985958	L	GP	E		O	X		O	O	O
Marion Co. Lake	Marion	LM012101	L	GP	E	X		X				
Marion Lake	Marion	LM020001	L	GP	E	X	X	X		X		
Marion W.A.	Marion	LM986470	W	GP	E			X				
SUBBASIN: UPPER NEOSHO (HUC 11070204)												
Chanute Santa Fe Lake	Neosho	LM044401	L	GP	E			X				
Circle Lake	Woodson	LM985941	L	GP	S			X				
Gridley City Lake	Coffey	LM045601	L	GP	E	X		X				
Iola City Lake	Allen	LM986050	L	GP	E	X		X				
Leonard's Lake	Woodson	LM985972	L	GP	S			X				
Neosho Falls City Lake	Woodson	LM985989	L	GP	E		O	X		O	O	O
New Strawn Park Lake	Coffey	LM073101	L	GP	E		O	X		O	O	O
Olpe City Lake	Lyon	LM041001	L	GP	E	X		X				
Wolf Creek Lake	Coffey	LM039601	L	GP	E			X		X		
Yates Center Reservoir	Woodson	LM069201	L	GP	E	X	X	X		X		

SMOKY HILL /SALINE RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: BIG (HUC 10260007)												
Big Creek Oxbow	Ellis	LM070301	L	GP	E			X				
Ellis City Lake	Ellis	LM069601	L	GP	E			X				
SUBBASIN: LADDER (HUC 10260004)												
Lake Scott State Park	Scott	LM011201	L	GP	S	X		X				
SUBBASIN: LOWER SALINE (HUC 10260010)												
Lucas City Lake	Russell	LM986128	L	GP	E			X				
Saline Co. SFL	Saline	LM013701	L	GP	E			X				
SUBBASIN: LOWER SMOKY HILL (HUC 10260008)												
Geary Co SFL	Geary	LM043201	L	GP	E			X				
Herington City Lake	Dickinson	LM069701	L	GP	E	X	X	X		X		
Herington City Park Lake	Dickinson	LM072801	L	GP	E		O	X		O	O	O
Herington Reservoir	Dickinson	LM047201	L	GP	S		X	X		X		
Lakewood Park Lake	Saline	LM069801	L	GP	E			X				
Mcpherson Co SFL	Mcpherson	LM013501	L	GP	E			X				
SUBBASIN: MIDDLE SMOKY HILL (HUC 10260006)												
Fossil Lake	Russell	LM052601	L	GP	E		X	X		X		
Kanopolis Lake	Ellsworth	LM016001	L	GP	E	X	X	X		X		
SUBBASIN: NORTH FORK SMOKY HILL (HUC 10260002)												
Sherman Co SFL/W.A.	Sherman	LM070201	L	GP	E			X				
Smoky Hill Garden Lake	Sherman	LM070101	L	GP	E			X				
SUBBASIN: UPPER SALINE (HUC 10260009)												
Plainville Township Lake	Rooks	LM070001	L	GP	E			X				
Sheridan W.A.	Sheridan	LM014501	W	GP	E			X				
Wilson Lake	Russell	LM014001	L	GP	E	X		X				
SUBBASIN: UPPER SMOKY HILL (HUC 10260003)												
Cedar Bluff Lake	Trego	LM013001	L	GP	E	X		X			X	
Logan County SFL	Logan	LM070401	L	GP	E		O	X		O	O	O

Designated uses of major classified lakes and lakes constituting outstanding national resource waters (continued)

SOLOMON RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: LOWER NORTH FORK SOLOMON (HUC 10260012)												
Francis Wachs W.A.	Smith	LM986012	L	GP	E		O	X		O	O	O
SUBBASIN: LOWER SOUTH FORK SOLOMON (HUC 10260014)												
Rooks Co. SFL	Rooks	LM011901	L	GP	E			X				
SUBBASIN: PRAIRIE DOG (HUC 10250015)												
Jewell Co. SFL	Jewell	LM012801	L	GP	E			X				
SUBBASIN: SOLOMON RIVER (HUC 10260015)												
Ottawa Co SFL	Ottawa	LM014101	L	GP	E			X				
Waconda Lake	Mitchell	LM018001	L	GP	E	X	X	X	X	X	X	
SUBBASIN: UPPER NORTH FORK SOLOMON (HUC 10260011)												
Kirwin Lake	Phillips	LM011001	L	GP	S	X		X			X	
Kirwin NWR	Phillips	LM986425	W	ON	S			X				
Logan City Lake	Phillips	LM069301	L	GP	E	X	O	X		O	O	O
SUBBASIN: UPPER SOUTH FORK SOLOMON (HUC 0260013)												
Antelope Lake	Graham	LM069501	L	GP	E			X				
Sheridan Co. SFL	Sheridan	LM069401	L	GP	E			X				
Webster Lake	Rooks	LM012001	L	GP	E	X		X			X	

Designated uses of major classified lakes and lakes constituting outstanding national resource waters (continued)

UPPER ARKANSAS RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: ARKANSAS-DODGECITY (HUC 11030003)												
Lake Charles	Ford	LM071101	L	GP	E		O	X		O	O	O
SUBBASIN: BUCKNER (HUC 11030006)												
Boy Scout Lake	Hodgeman	LM070601	L	GP	E	X	O	X		O	O	O
Ford County Lake	Ford	LM070801	L	GP	E			X				
Hain SFL	Ford	LM070901	L	GP	E			X				
Hodgeman Co SFL/W.A.	Hodgeman	LM986272	L	GP	E			X				
Jetmore Lake	Hodgeman	LM073901	L	GP	E	X		X				
SUBBASIN: LOWER WALNUT CREEK (HUC 11030008)												
Memorial Park Lake	Barton	LM071501	L	GP	E			X				
Stone Lake	Barton	LM074001	L	GP	E			X				
SUBBASIN: MIDDLE ARKANSAS-LAKE MCKINNEY (HUC 11030001)												
Beymer Lake	Kearney	LM071001	L	GP	E	X		X	X			
Hamilton Co. SFL	Hamilton	LM016101	L	GP	E			X				
Hamilton W.A.	Hamilton	LM016141	W	GP	E			X				
Lake Mckinney	Kearney	LM986098	L	GP	E						X	
SUBBASIN: PAWNEE (HUC 11030005)												
Concannon SFL	Finney	LM053601	L	GP	E			X				
Finney County W.A.	Finney	LM070701	L	GP	E		O	X		O	O	O
SUBBASIN: UPPER WALNUT CREEK (HUC 11030007)												
Goodman SFL	Ness	LM052401	L	GP	E			X				

UPPER REPUBLICAN RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: PRAIRIE DOG (HUC 10250015)												
Colby City Pond	Thomas	LM071301	L	GP	E		O	X		O	O	O
Norton Lake (Sebelius Lake)	Norton	LM010001	L	GP	E	X	X	X		X	X	
Norton W.A.	Norton	LM986418	W	GP	E			X				
SUBBASIN: SOUTH FORK BEAVER (HUC 10250012)												
Atwood Township Lake	Rawlins	LM071201	L	GP	E			X				
SUBBASIN: SOUTH FORK REPUBLICAN (HUC 10250003)												
Saint Francis W.A.	Cheyenne	LM071401	L	GP	E		O	X	X	O	O	O

VERDIGRIS RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: CANEY (HUC 11070106)												
Caney City Lake	Chautauqua	LM072601	L	GP	E		X	X		X		
Copan W.A.	Montgomery	LM986364	W	GP	E			X				
Murray Gill Lake	Chautauqua	LM048701	L	GP	E	X	X	X		X		
Sedan City North Lake	Chautauqua	LM048601	L	GP	E		X	X		X		
Sedan City South Lake	Chautauqua	LM072001	L	GP	E	X	X	X		X		
SUBBASIN: ELK (HUC 11070104)												
Elk City Lake	Montgomery	LM025001	L	GP	E	X	X	X		X		
Elk City W.A.	Montgomery	LM985293	W	GP	E			X				
Moline City Lake #2	Elk	LM048001	L	GP	E		X	X		X		
Moline City Santa Fe Lake #1	Elk	LM071801	L	GP	E	X	X	X		X		
Moline Reservoir	Elk	LM071901	L	GP	E	X	X	X		X		
Polk Daniels Lake (Elk Co. SFL)	Elk	LM012701	L	GP	E		X	X		X		
SUBBASIN: FALL (HUC 11070102)												
Fall River Lake	Greenwood	LM023001	L	GP	E	X	X	X		X		
Fall River W.A.	Greenwood	LM986371	W	GP	E			X				
Otis Creek Lake	Greenwood	LM053901	L	GP	E	X	X	X		X		
Severy City Lake	Greenwood	LM072101	L	GP	E	X	X	X		X		
SUBBASIN: MIDDLE VERDIGRIS (HUC 11070103)												
Big Hill Lake	Labette	LM031001	L	GP	E	X	X	X		X		
Edna City Lake	Labette	LM071701	L	GP	E	X		X				
Laclaire Lake	Montgomery	LM072901	L	GP	E			X				
Lake Tanko (Cherryvale City Lake)	Montgomery	LM071601	L	GP	E	X		X				
Montgomery Co SFL	Montgomery	LM010701	L	GP	E			X				
Pfister Park Lake	Montgomery	LM986159	L	GP	E		O	X		O	O	O
SUBBASIN: UPPER VERDIGRIS (HUC 11070101)												
Eureka Lake	Greenwood	LM040201	L	GP	E	X	X	X		X		
Madison City Lake	Greenwood	LM051801	L	GP	E	X	X	X		X		
New Yates Center Lake	Woodson	LM053801	L	GP	E		X	X		X		
Quarry Lake	Wilson	LM986357	L	GP	E		X	X		X		
Thayer New City Lake	Neosho	LM049601	L	GP	E		X	X		X		
Thayer Old City Lake	Neosho	LM072201	L	GP	E	X	X	X		X		
Toronto Lake	Woodson	LM024001	L	GP	E	X	X	X		X		
Toronto W.A.	Greenwood	LM986500	W	GP	E			X				
Wilson Co SFL	Wilson	LM015101	L	GP	E			X				
Woodson Co. SFL	Woodson	LM011801	L	GP	S			X				
Woodson W.A.	Woodson	LM011841	W	GP	S			X				

WALNUT RIVER BASIN

LAKE NAME	COUNTY NAME	PROJECT NAME	TYPE	CLASS	AL	PCR	DW	FP	GR	IWS	IR	LW
SUBBASIN: LOWER WALNUT RIVER (HUC 11030018)												
Butler Co. SFL	Butler	LM049401	L	GP	E			X				
Winfield City Lake	Cowley	LM050801	L	GP	E	X	X	X		X		
Winfield Park Lagoon	Cowley	LM072301	L	GP	E			X				
SUBBASIN: UPPER WALNUT RIVER (HUC 11030017)												
Augusta City Lake	Butler	LM040001	L	GP	E	X	X	X		X		
Augusta Santa Fe Lake	Butler	LM041601	L	GP	E	X	X	X		X		
El Dorado Lake	Butler	LM033001	L	GP	E	X	X	X		X		
Harvey Co. East Lake	Harvey	LM052001	L	GP	E	X		X				

SECTION THREE

MISCELLANEOUS SURFACE WATERS CONSTITUTING OUTSTANDING NATIONAL RESOURCE WATERS

Surface waters identified below shall be classified as outstanding national resource waters:

(1) Cimarron National Grasslands (Morton and Stevens counties); classification applies to all surface waters within national grasslands.

SECTION FOUR

MISCELLANEOUS SURFACE WATERS CONSTITUTING

SPECIAL AQUATIC LIFE USE WATERS

Surface waters identified below shall be designated as special aquatic life use waters:

(1) All oxbow lakes and wetlands within that portion of Allen County encompassed by a line that extends from latitude 37.7471, longitude 95.4336 west to latitude 37.7471, longitude 95.4600, then south to latitude 37.7400, longitude 95.4600, then east to latitude 37.7400, longitude 95.4433, then south to latitude 37.7329, longitude 95.4430, then east to latitude 37.7329, longitude 95.4338, then north to point of origin.

(2) All wetlands within that portion of Allen County encompassed by a line that extends from latitude 37.9220, longitude 95.4090 west to latitude 37.9216, longitude 95.5190, then south to latitude 37.8199, longitude 95.5190, then east to latitude 37.8199, longitude 95.4102, then north to point of origin.

(3) All wetlands within that portion of Anderson County encompassed by a line that extends from latitude 38.2130, longitude 95.2596 west to latitude 38.2130, longitude 95.4255, then south to latitude 38.1108, longitude 95.4260, then east to latitude 38.1103, longitude 95.2621, then north to point of origin.

(4) All wetlands within that portion of Atchison County encompassed by a line that extends from latitude 39.5355, longitude 95.5153 west to latitude 39.5355, longitude 95.5528, then south to latitude 39.5210, longitude 95.5528, then east to latitude 39.5210, longitude 95.5153, then north to point of origin.

(5) All cave waters and associated springs within that portion of Cherokee County encompassed by a line that extends from latitude 37.0745, longitude 94.6177 west to latitude 37.0745, longitude 94.7402, then south to latitude 36.9985, longitude 94.7402, then east to latitude 36.9985, longitude 94.6177, then north to point of origin.

6) All wetlands within those portions of Cherokee and Labette counties encompassed by a line that extends from latitude 37.3379, longitude 94.6177 west to latitude 37.3379, longitude

(94.7055, then south to latitude 37.1778, longitude 94.7045, then west to latitude 37.1787, longitude 95.0862, then south to latitude 36.9994, longitude 95.0862, then east to latitude 36.9985, longitude 94.6177, then north to point or origin.

(7) All wetlands within that portion of Douglas County encompassed by a line that extends from latitude 38.9279, longitude 95.2232 west to latitude 38.9279, longitude 95.2415, then south to latitude 38.9136, longitude 95.2415, then east to latitude 38.9136, longitude 95.2232, then north to point of origin.

(8) All wetlands, oxbow lakes and classified streams within that portion of Linn County encompassed by a line that extends from latitude 38.3742, longitude 94.6130 west to latitude 38.3742, longitude 94.8440, then south to latitude 38.1382, longitude 94.8425, then east to latitude 38.1389, longitude 94.6130, then north to point of origin.

(9) All wetlands within that portion of Woodson County encompassed by a line that extends from latitude 37.8219, longitude 95.8520 west to latitude 37.8219, longitude 95.8704, then south to latitude 37.8069, longitude 95.8707, then east to latitude 37.8069, longitude 95.8520, then south to latitude 37.7922, longitude 95.8520, then east to latitude 37.7922, longitude 95.8337, then north to latitude 37.8069, longitude 95.8337, then west to latitude 37.8069, longitude 95.8520, then north to point or origin.

(10) Cheyenne Bottoms Preserve (Barton County); classification applies to all surface waters within the Nature Conservancy wildlife preserve.

(11) Cimarron National Grasslands (Morton and Stevens counties); classification applies to all surface waters within national grasslands.

(12) Konza Prairie Natural Area (Geary and Riley counties); classification applies to all surface waters within natural area

(13) McPherson Valley Wetlands (McPherson County); classification applies to all surface waters within state owned portions of wetlands.

Kansas Department of Health and Environment

Surface Water Quality Standards

DIVISION OF ENVIRONMENT
BUREAU OF WATER
TECHNICAL SERVICES SECTION

Forbes Field, Bldg 283
Topeka, Kansas 66620-0001
785-296-5500

November 2000

The Following regulations have been printed for use by this agency as a guide. These regulations have been taken from the official Kansas Administrative Regulations publication. Every effort has been made to assure the accuracy of this document, however this copy of Article 16 may not be used as evidence in a court of law. Copies for this purpose must be obtained from the official state records which are available through the Office of the Secretary of State, Capitol Building, 2nd Floor, Topeka, Kansas 66612

NOTE: Due to a typographic error, the ammonia value of 9.29 mg/l (for a pH of 6.8 at a temperature of 14° C) on table 1d, page 25 - pH and Temperature Dependent Chronic Aquatic Life Criteria for Total Ammonia with Early Life Stages of Fish Present, and the Ammonia of 1.09 mg/L (for a pH of 7.5 and a temperature of 0-7° C) on table 1e, page 26 - pH and Temperature Dependent Chronic Aquatic Life for Total Ammonia with Early Life Stages of Fish Absent, have not be approved by EPA for use. KDHE will not use these values in permit calculations. The values will be corrected in the next revision.

Article 16. -- SURFACE WATER QUALITY STANDARDS

28-16-28b. Definitions.

As used in these regulations, the following terms shall have these meanings: (a) "Alluvial aquifer" means the sediment that is associated with and deposited by a stream and that contains water capable of being produced from a well.

(b) "Alternate low flow" means a low flow, alternate to the 7Q10 flow, based seasonally, hydrologically, or biologically, or a low flow determined through a water assurance district. Wherever used in this regulation in the context of mixing zones, the term shall refer to a minimum amount of stream flow occurring immediately upstream of a wastewater discharge and available, in whole or in part, for dilution and assimilation of wastewater discharges.

(c) "Antidegradation" means the regulatory actions and measures taken to prevent or minimize the lowering of water quality in surface waters of the state, including those streams, lakes, and wetlands in which existing water quality exceeds the level required for maintenance and protection of the existing uses.

(d) "Artificial sources" means sources of pollution that result from human activities that can be abated by construction of control structures, modification of operating practices, complete restraint of activities, or some combination of these methods.

(e) "Background concentration" means the concentration of any elemental parameter listed in tables 1a, 1b, 1d, and 1e of K.A.R. 28-16-28e, or any elemental substance meeting the definition of pollutant in K.A.R. 28-16-28b(qq), that occurs in a surface water immediately upstream of a point source or nonpoint source under consideration and is from natural sources.

(f) "Base flow" means that portion of a stream's flow contributed by sources of water other than precipitation runoff. Wherever used in this regulation in the context of stream classification, the term shall refer to a fair weather flow sustained primarily by springs or groundwater seepage, wastewater discharges, irrigation return flows, releases from reservoirs, or some combination of these factors.

(g) "Bioaccumulation" means the accumulation of toxic substances in plant or animal tissue through either bioconcentration or biomagnification.

(h) "Bioassessment methods and procedures" means the use of biological methods of assessing surface water quality including field investigations of aquatic organisms and laboratory or field aquatic toxicity tests.

(i) "Bioconcentration" means the concentration and incorporation of toxic substances into body tissues from ambient sources.

(j) "Biomagnification" means the transport of toxic substances through the food chain through successive cycles of eating and being eaten, and through the subsequent accumulation and concentration of these substances in higher-order consumers and predators.

(k) "Biota" means the animal and plant life and other organisms of a given geographical region.

(l) "Carcinogenic" means having the property of inducing the production of cancerous cells in organisms.

(m) "Classified surface water" means any surface water or surface water segment that supports or, in the absence of artificial sources of pollution, would support one or more of the designated uses of surface water defined in K.A.R. 28-16-28d(a), or that otherwise meets the criteria for classification given in K.A.R. 28-16-28d(b).

(n) "Compliance schedule" means any provision in a discharge permit, license, or enforceable order issued by the department pursuant to the federal clean water act or K.S.A. 65-165, and

amendments thereto, that, for the purposes of meeting water quality-based effluent limitations, technology-based limits, effluent limitations determined through best professional judgement, or other requirements in the Kansas statutes and regulations, provides a specified period of time for the construction or renovation of a wastewater treatment facility and the completion of any related scientific or engineering studies, reports, plans, design specifications, or other submittals required by the department.

(o) "Condition of acute toxicity" means any concentration of a toxic substance that exceeds the applicable acute criterion for aquatic life support presented in K.A.R. 28-16-28e or, for substances not listed in K.A.R. 28-16-28e or for mixtures of toxic substances, any concentration that exceeds 0.3 times the median lethal concentration. The concentration at which acute toxicity exists shall be determined through laboratory toxicity tests conducted in accordance with the United States environmental protection agency's "methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms," fourth edition, as published in August 1993, which is hereby adopted by reference.

(p) "Condition of chronic toxicity" means any concentration of a toxic substance that exceeds the applicable chronic criterion for aquatic life support presented in K.A.R. 28-16-28e or, for substances not listed in K.A.R. 28-16-28e or for mixtures of toxic substances, any concentration that exceeds the no-observed-effect level. The concentration at which chronic toxicity exists shall be determined through laboratory toxicity tests conducted in accordance
with the United States environmental protection agency's "short-term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms," third edition, as published in July 1994, which is hereby adopted by reference.

(q) "Criterion" means any numerical element or narrative provision of the surface water quality standards representing an enforceable water quality condition.

(r) "Department" means the Kansas department of health and environment.

(s) "Designated use" means any of the beneficial uses specifically attributed to surface waters of the state in K.A.R. 28-16-28d.

(t) "Discharge" means the release of effluent, either directly or indirectly, into surface waters of the state.

(u) "Ecological integrity" means the natural or unimpaired structure and functioning of an aquatic or terrestrial ecosystem.

(v) "Effluent" means the sewage or other wastewater discharged from an artificial source.

(w) " Exceptional state waters" means any of the surface waters or surface water segments that are of remarkable quality or of significant recreational or ecological value, are listed in the surface water register, as defined in K.A.R. 28-16-28b (zz), and are afforded the level of water quality protection under the antidegradation provisions of K.A.R. 28-16-28c(a) and the mixing zone provisions of K.A.R. 28-16-28c(b).

(x) "Existing use" means any of the beneficial uses described in K.A.R. 28-16-28d known to have occurred in, or to have been made of, a surface water or surface water segment on
or after November 28, 1975.

(y) "Fecal coliform bacteria" means facultatively anaerobic, gram negative, non-spore forming, rod-shaped bacteria that, when cultured under specific laboratory conditions, will ferment lactose, thereby producing acid, gas, or both.

(z) "Federal clean water act" means the federal water pollution control act, 33 U.S.C. 1251 et seq., as amended on February 4, 1987.

(aa) "General purpose waters " means any classified surface water that is not classified as an outstanding

national resource water or an exceptional state water.

(bb) "Groundwater" means water located under the surface of the land that is or can be the source of supply for wells, springs, or seeps, or that is held in aquifers or the soil profile.

(cc) "Kansas implementation procedures: surface water" dated September 15, 2000, means written departmental procedures used for carrying out specific provisions of surface water quality standards, available upon request from KDHE's division of environment, which is hereby adopted by reference.

(dd) "Maximum contaminant level" means any of the enforceable standards for finished drinking water quality promulgated by the United States environmental protection
agency pursuant to section 300g-1(b)(3) of the federal safe drinking water act, 42 U.S.C. 300f
through 300j-9, as amended on August 6, 1996, which is hereby adopted by reference.

(ee) "Median lethal concentration" means the concentration of a toxic substance or a mixture of toxic substances calculated to be lethal to 50 percent of the population of test organisms in an acute toxicity test.

(ff) "Microfibers per liter (µfibers/L)" means the number of microscopic particles with a length-to-width ratio of 3:1 or greater present in a volume of one liter.

(gg) "Microgram per liter (µg/L)" means the concentration of a substance at which one one-millionth of a gram (10^{-6} g) of the substance is present in a volume of one liter.

(hh) "Milligram per liter (mg/L)" means the concentration of a substance at which one one-thousandth of a gram (10^{-3} g) of the substance is present in a volume of one liter.

(ii) "Mixing zone" means the designated portion of a stream or lake where a discharge is incompletely mixed with the receiving surface water and where, in accordance with K.A.R. 28-16-28e, concentrations of certain pollutants may legally exceed chronic water quality criteria associated with the established designated uses that are applied in most other portions of the receiving surface water.

(jj) "Mutagenic" means having the property of directly or indirectly causing a mutation.

(kk) "Nonpoint source" means any activity that is not required to have a national pollutant discharge elimination system permit and that results in the release of pollutants to waters of the state. This release may result from precipitation runoff, aerial drift and deposition from the air, or the release of subsurface brine or other contaminated groundwaters to surface waters of the state.

(ll) "No-observed-effect level" means the highest concentration of a toxic substance, or a mixture of toxic substances, that has no statistically significant adverse effect on the population of test organisms in a chronic toxicity test.

(mm) "Outstanding national resource water" means any of the surface waters or surface water segments of extraordinary recreational or ecological significance identified in the surface water register, as defined in K.A.R. 28-16-28b (zz), and afforded the highest level of water quality protection under the antidegradation provisions of K.A.R. 28-16-28c(a) and the mixing zone provisions of K.A.R. 28-16-28c(b).

(nn) "pH" means the common logarithm of the reciprocal of the hydrogen ion concentration measured in moles per liter, expressed on a scale that ranges from zero to 14, with values less than seven being more acidic and values greater than seven being more alkaline.

(oo) "Picocurie per liter (pCi/L)" means a volumetric unit of radioactivity equal to 2.22 nuclear transformations per minute per liter.

(pp) "Point source" means any discernible, confined, and discrete conveyance including any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or floating craft, from which pollutants are or may be discharged. This term may include structures or site conditions

that act to collect and convey stormwater runoff from roadways, urban areas, or industrial sites. This term shall not include agricultural stormwater discharges or return flows from irrigated agricultural land.

(qq) "Pollutant" means any physical, biological, or chemical conditions, substances, or combination of substances released into surface waters of the state that results in surface water pollution, as defined in K.A.R. 28-16-28b(rr).

(rr) "Pollution" means either of the following:

(1) Contamination or other alteration of the physical, chemical, or biological properties of the surface waters of the state, including changes in temperature, taste, odor, turbidity, or color of the waters, or discharges of gaseous, liquid, solid, radioactive, microbiological, or other substances into surface waters in a manner that may create a nuisance or render these waters harmful, detrimental, or injurious to public health, safety, or welfare; to domestic, industrial, agricultural, recreational, or other beneficial uses; or to livestock, domestic animals, or native or naturalized plant or animal life; or

(2) any discharge that will or is likely to exceed state effluent limitations predicated upon technology-based effluent standards, or water quality-based standards.

(ss) "Potable water" means water that is suitable for drinking and cooking purposes in terms of both human health and aesthetic considerations.

(tt) "Precipitation runoff" means the rainwater, or the meltwater derived from snow, hail, sleet, or other forms of atmospheric precipitation, that flows by gravity over the surface of the land and into streams, lakes, or wetlands.

(uu) "Presedimentation sludge" means a slurry or suspension of residual solid materials derived from an initial step in the production of potable water. Presedimentation sludge shall also include residual solids originating from the raw water supply used for industrial or other nonpotable water purposes, before the addition of any artificial materials. The solid materials shall include sand, silt, and other easily settleable particles originating from the raw water supply.

(vv) "Private surface water" means any freshwater reservoir or pond that is both located on and completely bordered by land under common private ownership.

(ww) "Seven-day, ten-year low flow (7Q10 flow)" means the seven-day average low flow having a recurrence frequency of once in 10 years, as statistically determined from historical flow data. Where used in this regulation in the context of mixing zones, the term shall refer to the minimum amount of stream flow occurring immediately upstream of a wastewater discharge and available, in whole or in part, for dilution or assimilation of wastewater discharges.

(xx) "Site-specific criterion" means any criterion applicable to a given classified surface water segment and developed for the protection of the designated uses of that segment alone.

(yy) "Stream flow" means the volume of water moving past a stream cross-sectional plane per unit of time.

(zz) "Surface water register" means a list of the state's major classified surface waters, including a listing of waters recognized as outstanding national resource waters or exceptional state waters, and the surface water use designations for each classified surface water, periodically updated and published by the department pursuant to the requirements of K.A.R. 28-16-28d(c)(2) and K.A.R. 28-16-28f(a).

(aaa) "Surface water segment" means a delineated portion of a stream, lake, or wetland.

(bbb) "Surface waters" means all of the following:

(1) Streams, including rivers, creeks, brooks, sloughs, draws, arroyos, canals, springs, seeps, and cavern streams, and any alluvial aquifers associated with these surface waters;

(2) lakes, including oxbow lakes and other natural lakes and man-made reservoirs, lakes, and ponds; and

(3) wetlands, including water bodies meeting the technical definition for jurisdictional wetlands given in the "corps of engineers wetlands delineation manual," as published in January 1987, which is hereby adopted by reference.

(ccc) "Surface waters of the state" means all surface waters occurring within the borders of the state of Kansas or forming a part of the border between Kansas and one of the adjoining states.

(ddd) "Teratogenic" means having the property of causing abnormalities that originate from impairment of an event that is typical in embryonic or fetal development.

(eee) "Toxic substance" means any substance that produces deleterious physiological effects in humans, animals, or plants.

(fff) "Turbidity" means the cloudiness of water as measured by optical methods (nephelometry) and expressed in standard nephelometric units.

(ggg) "Use attainability analysis" means a study conducted or accepted by the department that is designed to determine whether or not a surface water or surface water segment supports, or is capable of supporting in the absence of artificial sources of pollution, one or more of the designated uses defined in K.A.R. 28-16-28d(a).

(hhh) "Variance" means the department's written approval and authorization of a proposed action that knowingly will result in a lack of conformity with one or more of the criteria of K.A.R. 28-16-28e(c) but that is deemed necessary based on the provisions of 40 C.F.R. 131.10(g), as in effect on July 1, 1996, which is hereby adopted by reference. Variances shall be administered by the department in accordance with K.A.R. 28-16-28f(e).

(iii) "Water-effect ratio (WER)" means the numerical toxicity (median lethal concentration or no-observed-effect level) of a chemical pollutant diluted in water from a given stream, lake, or wetland divided by the numerical toxicity of the same pollutant diluted in laboratory water.

(jjj) "Water quality certification" means the department's written finding that a proposed action that impacts upon water quality will comply with the terms and conditions of the surface water quality standards.

(kkk) "Whole-effluent toxicity limitation" means any restriction imposed by the department on the overall acute or chronic toxicity of an effluent discharged to a surface water.

(lll) "Zone of initial dilution" means the region of a surface water in the immediate vicinity of a discharge where acute and chronic criteria may be exceeded. The zone shall comprise, in terms of volume, no more than 10 percent of the mixing zone. (Authorized by K.S.A. 1999 Supp. 65-171d and K.S.A. 65-171m; implementing K.S.A. 1999 Supp. 65-165 and 65-171d, and K.S.A. 65-171m; effective May 1, 1986; amended Aug. 29, 1994; amended July 30, 1999; amended November 3, 2000.

28-16-28c. General provisions.

(a) Antidegradation.

(1) General purpose waters.

(A) Levels of water quality in surface waters of the state shall be maintained to protect the existing uses of those surface waters.

(B) For all surface waters of the state, if existing water quality is better than applicable water quality criteria established in these regulations, that existing water quality shall be fully maintained and protected. Water quality may be lowered only if the department finds, after full satisfaction of the intergovernmental coordination and public participation requirements on antidegradation, contained in the Kansas implementation procedures, and defined in K.A.R. 28-16-28b (cc), that a lowering of water quality is needed to allow for important social and

economic development in the geographical area in which the waters are located. In allowing the lowering of water quality, the maintenance and protection of existing uses shall be ensured by the department, and the highest statutory and regulatory requirements for all new and existing point sources of pollution and all cost-effective and reasonable best management practices for nonpoint sources of pollution shall be achieved.

(2) Wherever state surface waters constitute exceptional state waters, discharges shall be allowed only if existing uses and existing water quality are maintained and protected.

(3) Wherever state surface waters constitute an outstanding national resource water, existing uses and existing water quality shall be maintained and protected. New or expanded discharges shall not be allowed into outstanding national resource waters.

(4) No degradation of surface water quality by artificial sources of pollution shall be allowed if the degradation will result in harmful effects on populations of any threatened or endangered species of aquatic or semiaquatic life or terrestrial wildlife or its critical habitat as defined in the federal endangered species act, 16 U.S.C. 1531 et seq., as amended on October 7, 1988, or in K.S.A. 32-960, and amendments thereto, and K.A.R. 115-15-3.

(5) Temporary sources of pollution complying with the provisions of K.A.R. 28-16-28c(d) and K.A.R. 28-16-28e(b), and producing only ephemeral surface water quality degradation not harmful to existing uses, may be allowed by the department.

(6) Implementation of these antidegradation provisions for thermal discharges shall be consistent with the requirements of the federal clean water act.

(7) Implementation of these antidegradation provisions shall be consistent with the guidelines provided in the Kansas implementation procedures, available upon request from the department.

(b) Mixing zones.

(1) General limitations. Mixing zones shall not extend across public drinking water intakes, stream tributary mouths, or swimming or boat ramp areas, nor shall mixing zones exist in locations that preclude the normal upstream or downstream movement or migration of aquatic organisms. Mixing zones associated with separate discharges shall not overlap unless it is demonstrated, to the department's satisfaction, that the over lapping will not result in a violation of the general water quality criteria set forth in K.A.R. 28-16-28e(b) or in an impairment of the existing uses of the receiving surface water.

(2) Discharges into classified streams. No mixing zone within a classified stream shall extend beyond the middle of the nearest downstream current crossover point, where the main current flows from one bank to the opposite bank, or more than 300 meters downstream from the point of effluent discharge.

(3) If the ratio of the receiving stream 7Q10 flow to the discharge design flow is less than 3:1, then the mixing zone shall not exceed the cross-sectional area or the volumetric flow of the stream during 7Q10 conditions, as measured immediately up stream of the discharge during the 7Q10 flow.

(4) Mixing zones shall be applied in accordance with K.A.R. 28- 16-28c (b)(7) and (b)(8)(A), (B), (C), and (D), based on the classification and designated uses of a stream segment for individual pollutants. For surface waters classified as outstanding national resource waters, exceptional state waters, or designated as special aquatic life use waters, mixing zones for specific discharges may be allowed by the department. Mixing zones also may be allowed where there is no aquatic life criteria for an individual pollutant.

(5) Wherever site conditions preclude the rapid dispersion and dilution of effluent within the receiving surface water or if, in the judgement of the department, the presence of a mixing zone would unduly jeopardize human health or any of the existing uses of the receiving surface water, the right to prohibit the use of mixing zones

or to place more stringent limitations on mixing zones than those stipulated in K.A.R. 28-16-28c(b)(2), (3), and (12) shall be reserved by the department.

(6) Outstanding national resource waters. Mixing zones may be allowed by the department for existing permitted discharges in stream segments classified in the future as outstanding national resource waters but shall be evaluated on a case-by-case basis.

(7) Exceptional state waters. If the ratio of the receiving stream 7Q10 flow to the discharge design flow is equal to or greater than 3:1, the mixing zone shall not exceed 25 percent of the cross-sectional area or volumetric flow of the receiving stream during 7Q10 conditions, measured immediately upstream of the discharge during the 7Q10 flow. In the calculation of the mixing zone cross-sectional area or volumetric flow, the greater of the 7Q10 flow or 0.003 cubic meters per second shall be applied to any surface waters classified as exceptional state waters.

(8) General purpose waters.

(A) Special aquatic life use waters. If the ratio of the receiving stream 7Q10 flow to the discharge design flow is equal to or greater than 3:1, the mixing zone shall not exceed 25 percent of the cross-sectional area or volumetric flow of the receiving stream during 7Q10 conditions, measured immediately up stream of the discharge during the 7Q10 flow. In the calculation of the mixing zone cross-sectional area or volumetric flow, the greater of the 7Q10 flow or 0.003 cubic meters per second shall be applied to any surface waters designated as special aquatic life use waters.

(B) Expected aquatic life use waters. If the ratio of the receiving stream 7Q10 flow to the discharge design flow is equal to or greater than 3:1, the mixing zone shall not exceed 50 percent of the cross-sectional area or volumetric flow of the receiving stream during 7Q10 conditions, measured immediately up stream of the discharge during the 7Q10 flow. In the calculation of the mixing zone cross-sectional area or volumetric flow, the greater of the 7Q10 flow or 0.03 cubic meters per second shall be applied to any surface waters designated as expected aquatic life use waters.

(C) Restricted aquatic life use waters. If the ratio of the receiving stream 7Q10 flow to the discharge design flow is equal to or greater than 3:1, the mixing zone shall not exceed 100 percent of the cross-sectional area or volumetric flow of the receiving stream during 7Q10 conditions, measured immediately up stream of the discharge during the 7Q10 flow. In the calculation of the mixing zone cross-sectional area or volumetric flow, the greater of the 7Q10 flow or 0.03 cubic meters per second shall be applied to any surface waters designated as restricted aquatic life use waters.

(D) Recreational uses. If the ratio of the receiving stream 7Q10 flow to the discharge design flow is equal to or greater than 3:1, the mixing zone shall not exceed 25 percent of the cross-sectional area or volumetric flow of the receiving stream at 7Q10 conditions, measured immediately upstream of the discharge during the 7Q10 flow. In the application of this regulation, the 25 percent mixing zone shall apply only to recreational criteria. In the calculation of the mixing zone cross-sectional area or volumetric flow, the greater of the 7Q10 flow or 0.03 cubic meters per second shall be applied to surface waters designated for primary or secondary contact recreational use. If the ratio of the receiving stream 7Q10 flow to the discharge design flow is less than 3:1, then the mixing zone shall not exceed the cross-sectional area or volumetric flow of the receiving stream at 7Q10 conditions.

(9) Alternate low flows, as defined in K.A.R. 28-16-28b(d), may be utilized by the department in the calculation of mixing zone cross-sectional area or volumetric flow for specific water quality criteria. The 30Q10 flow for ammonia or the guaranteed minimum flow provided by a water assurance district, if applicable, shall be used by the department in the calculation of the mixing zone cross-sectional area or volumetric flow. Other alternate low flows, with a specific recurrence frequency and averaging period, shall be considered by the department if those flows

will not result in excursions above aquatic life criteria more frequently than once every three years. The right to approve or disapprove any proposed alternate low flow shall be reserved by the department.

(10) Alternate mixing zones employing specific linear distances for mixing zones or alternate stream dilution volumes or cross- sectional areas, or both, may be allowed by the department. Site- specific mixing zones may be allowed if data generated from a site-specific study supports the use of an alternate mixing zone, but still maintains a zone of passage for aquatic life.

(11) Discharges into classified lakes. Mixing zones shall be prohibited by the department from extending into any lake classified as an outstanding national resource water, exceptional state water, or designated as a special aquatic life use water pursuant to K.A.R. 28-16-28d(c). Mixing zones in lakes designated as expected aquatic life use water or restricted aquatic life use waters may be allowed by the department if the mixing zones do not extend farther than 50 meters from the point of effluent discharge or do not comprise more than one percent of the total volume of the receiving lake as measured at conservation pool.

(12) Discharges into classified wetlands. Mixing zones shall be prohibited by the department from extending into any classified lacustrine or palustrine wetland as defined in the "corps of engineers wetlands delineation manual," as published in January 1987.

(c) Special conditions. The following special conditions shall not remove the obligation to design, build, or use pollution control structures or methods to control point and nonpoint sources of pollution as defined in K.A.R. 28-16-28b(kk) and (pp).

(1) Low flow. Classified streams may be excluded by the department from the application of some or all of the requirements of K.A.R. 28-16-28e(c) when stream flow is less than the 7Q10 flow, alternate low flow, or the minimum low flow, as described in K.A.R. 28-16-28c(b) (7) and (b) (8) (A), (B), (C), and (D).

(2) High flow. Classified streams may be excluded by the department from the application of the numerical criteria for fecal coliform bacteria in K.A.R. 28-16-28e(c) when actual stream flow exceeds the flow that is, over the long term, surpassed only 10% of the time.

(3) Effluent-created flow. For any current classified stream segment in which continuous flow is sustained primarily through the discharge of treated effluent and, as demonstrated by a use attainability analysis, does not meet the requirements of a classified stream in 28-16-28d(b), the discharger shall not be required to provide treatment beyond that treatment required in the federal secondary treatment regulation, 40 CFR. 133.102, as in effect on July 1, 1996. This discharge shall not violate the general surface water quality criteria listed in K.A.R. 28-16- 28e(b) or impair any of the existing or attained designated uses of a downstream classified stream surface water segment. If a use attainability analysis demonstrates that the designated uses of a surface water segment are not attainable, then the new use designations shall be adopted into the regulations at the next systematic review or subsequent triennial review.

(d) Treatment requirements.

(1) All effluent shall receive appropriate minimum levels of treatment as required by the federal clean water act.

(2) Effluent shall receive a higher level of treatment than that stipulated in K.A.R. 28-16-28c(d)(1), if the department deter mines that this higher level of treatment is needed to fully com ply with the terms and conditions of K.A.R. 28-16-28c(a) or K.A.R. 28-16-28e.

(e) Analytical testing. All methods of sample collection, preservation, and analysis used in applying any of these regulations shall be in accordance with those methods prescribed by the department.

(f) Application of standards to privately owned surface waters. The application of water quality

standards to privately owned water bodies shall be subject to the provisions of K.S.A. 65- 171d, and amendments thereto. (Authorized by K.S.A. 1998 Supp. 65-171d and K.S.A. 65-171m; implementing K.S.A. 1998 Supp. 65-165 and 65-171d, and K.S.A. 65-171m; effective May 1, 1986; amended, T-87-8, May 1, 1986; amended May 1, 1987; amended Aug. 29, 1994, amended July 30, 1999.)

28-16-28d. Surface water use designation and classification.

(a) Designated uses of surface waters shall be defined as follows.

(1) "Agricultural water supply use" means the use of surface water for agricultural purposes, including the following:

(A) "Irrigation," which means the withdrawal of surface water for application onto land; and

(B) "livestock watering," which means the provision of surface water to livestock for consumption.

(2) "Aquatic life support use" means the use of surface water for the maintenance of the ecological integrity of streams, lakes, and wetlands, including the sustained growth and propagation of native aquatic life; naturalized, important, recreational aquatic life; and indigenous or migratory semiaquatic or terrestrial wildlife directly or indirectly dependent on surface water for survival.

(A) "Special aquatic life use waters" means surface waters that contain combinations of habitat types and indigenous biota not found commonly in the state, or surface waters that contain representative populations of threatened or endangered species.

(B) "Expected aquatic life use waters" means surface waters containing habitat types and indigenous biota commonly found or expected in the state.

(C) "Restricted aquatic life use waters" means surface waters containing indigenous biota limited in abundance or diversity by the physical quality or availability of habitat, due to natural deficiencies or artificial modifications, compared to more suit able habitats in adjacent waters.

(3) "Domestic water supply use" means the use of surface water, after appropriate treatment, for the production of potable water.

(4) "Food procurement use" means the use of surface water for the obtaining of edible forms of aquatic or semiaquatic life for human consumption.

(5) "Groundwater recharge use" means the use of surface water for the replenishing of fresh or usable groundwater resources. This use may involve the infiltration and percolation of surface water through sediments and soils or the direct injection of surface water into underground aquifers.

(6) "Industrial water supply use" means the use of surface water for nonpotable purposes by industry, including withdrawals for cooling or process water.

(7) "Recreational use" means the use of surface water for primary or secondary contact recreation.

(A) "Primary contact recreational use" means recreation during which the body is immersed in surface water to the extent that some inadvertent ingestion of water is probable. This use shall include boating, mussel harvesting, swimming, skin diving, waterskiing, and windsurfing.

(B) "Secondary contact recreational use" means recreation during which ingestion of surface water is not probable. This use shall include wading, fishing, trapping, and hunting.

(b) Surface water classification. Surface waters shall be classified as follows:

(1) Classified streams shall include all streams with mean summer base flows exceeding 0.003 cubic meters per second. Regardless of flow, a stream shall be classified if studies conducted or accepted by the department show that pooling of water during periods of zero flow provides important refuges for aquatic life and permits biological

recolonization of intermittently flowing segments.

(2) Classified lakes shall be all lakes owned by federal, state, county, or municipal authorities and all privately owned lakes that serve as public drinking water supplies or that are open to the general public for primary or secondary contact recreation.

(3) Classified wetlands shall be all wetlands owned by federal, state, county, or municipal authorities, all privately owned wet lands open to the general public for hunting, trapping, or other forms of secondary contact recreation, and all wetlands classified as outstanding national resource waters or exceptional state waters, or designated as special aquatic life use waters pursuant to K.A.R. 28-16-28d(c). Wetlands created for the purpose of wastewater treatment shall not be considered classified wetlands.

(c) Assignment of uses to surface waters.

(1) At a minimum, all classified surface waters shall be designated for secondary contact recreational use and one of the three designations of aquatic life support use described in K.A.R. 28-16-28d(a)(2). Classified surface waters shall be designated for uses based upon the results of use attainability analyses conducted or accepted by the department. The provisions of the federal water quality standards regulation, 40 C.F.R. Part 131, as in effect on July 1, 1996, shall be followed and are hereby adopted by reference.

(2) A register of surface water classifications and use designations shall be maintained by the department. This register shall identify the designated uses of all listed major classified streams, lakes, and wetlands and list those streams, lakes, and wetlands recognized by the department as outstanding national resource waters or exceptional state waters. In the application of the current regulations, use designations of listed surface waters and waterbodies recognized as outstanding national re source waters, or exceptional state waters shall be those identified in the "Kansas surface water register," dated June 1, 1999, which is hereby adopted by reference.

(3) Beneficial use designations for classified streams, lakes, and wetlands not listed in the surface water register shall be determined by the department on a case-by-case basis in accordance with the requirements of K.A.R. 28-16-28d(c)(1). (Authorized by K.S.A. 1998 Supp. 65-171d and K.S.A. 65-171m; implementing K.S.A. 1998 Supp. 65-165 and 65-171d, and K.S.A. 65-171m; effective May 1, 1986; amended, T-87-8, May 1, 1986; amended May 1, 1987; amended Aug. 29, 1994; amended July 30, 1999.)

28-16-28e. Surface water quality criteria.

(a) Criteria development guidance. The development of surface water quality criteria for substances not listed in these standards shall be guided by water quality criteria published by the United States environmental protection agency. When the department finds that the criteria listed in this regulation are underprotective or overprotective for a given surface water segment, appropriate site-specific criteria may be developed and applied by the department, in accordance with K.A.R. 28-16-28f (f), using bioassessment methods or other related scientific procedures, including those procedures described in the United States environmental protection agency's "water quality standards handbook," second edition, as published in August 1994.

(b) General criteria for surface waters. The following criteria shall apply to all surface waters, regardless of classification.

(1) Surface waters shall be free, at all times, from the harmful effects of substances that originate from artificial sources of pollution and that produce any public health hazard, nuisance condition, or impairment of a designated use.

(2) Hazardous materials derived from artificial sources, including toxic substances, radioactive isotopes,

and infectious microorganisms derived directly or indirectly from point or nonpoint sources, shall not occur in surface waters at concentrations or in combinations that jeopardize the public health or the survival or well-being of livestock, domestic animals, terrestrial wildlife, or aquatic or semiaquatic life.

(3) Surface waters shall be free of all discarded solid materials, including trash, garbage, rubbish, offal, grass clippings, discarded building or construction materials, car bodies, tires, wire, or other unwanted or discarded materials. The placement of stone and concrete rubble for bank stabilization shall be acceptable to the department, if all other required permits are obtained before placement.

(4) Surface waters shall be free of floating debris, scum, foam, froth, or other floating materials directly or indirectly attributable to artificial sources of pollution.

(5) Oil and grease from artificial sources shall not cause any visible film or sheen to form upon the surface of the water or upon submerged substrate or adjoining shorelines, nor shall these materials cause a sludge or emulsion to be deposited beneath the surface of the water or upon the adjoining shorelines.

(6) Surface waters shall be free of deposits of sludge or fine solids attributable to artificial sources of pollution.

(7) Taste-producing and odor-producing substances of artificial origin shall not occur in surface waters at concentrations that interfere with the production of potable water by conventional water treatment processes, that impart an unpalatable flavor to edible aquatic or semiaquatic life or terrestrial wildlife, or that result in noticeable odors in the vicinity of surface waters.

(8) The natural appearance of surface waters shall not be altered by the addition of color-producing or turbidity-producing substances of artificial origin.

(9) In stream segments where background concentrations of naturally occurring substances, including chlorides and sulfates, exceed the water quality criteria listed in Table 1a of K.A.R. 28-16-28e(d), at ambient flow, the existing water quality shall be maintained, and the newly established numeric criteria shall be the background concentration, as defined in K.A.R. 28-16-28b(f). Background concentrations shall be established using the methods outlined in the "Kansas implementation procedures: surface water," dated September 15, 2000, and available upon request from the department.

(c) Criteria for designated uses of surface waters. The following criteria shall apply to all classified surface waters designated for the indicated beneficial uses.

(1) Agricultural water supply use. The water quality criteria for irrigation and livestock watering set forth in Table 1a of K.A.R. 28-16-28e(d) shall not be exceeded outside of mixing zones due to artificial sources of pollution.

(2) Aquatic life support use.

(A) Dissolved oxygen. The concentration of dissolved oxygen in surface waters shall not be lowered below 5.0 mg/L by the influence of artificial sources of pollution.

(B) Nutrients. The introduction of plant nutrients into streams, lakes, or wetlands from artificial sources shall be controlled to prevent the accelerated succession or replacement of aquatic biota or the production of undesirable quantities or kinds of aquatic life.

(C) pH. Artificial sources of pollution shall not cause the pH of any surface water outside of a zone of initial dilution to be below 6.5 or above 8.5.

(D) Suspended solids. Suspended solids added to surface waters by artificial sources shall not interfere with the behavior, reproduction, physical habitat, or other factors related to the survival and propagation of aquatic or semiaquatic life or terrestrial wildlife. In the application of this provision, suspended solids associated with

discharges of presedimentation sludge from water treatment facilities shall be deemed noninjurious to aquatic and semiaquatic life and terrestrial wildlife, if these discharges comply fully with the requirements of K.A.R. 28-16-28e(b)(6) and (8) and K.A.R. 26-16-28e(c)(2)(F).

(E) Temperature.

(i) Except as provided in K.A.R. 28-16-28e(c)(2)(E)(ii), a discharge shall not elevate the temperature of a receiving surface water beyond the zone of initial dilution above 32° C (90° F). Heat of artificial origin shall not be added to a surface water in excess of the amount that will raise the temperature of the water beyond the mixing zone more than 3° C above natural conditions. Additionally, a discharge to a receiving water shall not lower the temperature of the water beyond the mixing zone more than 3° C below natural conditions. The normal daily and seasonal temperature variations occurring within a surface water before the addition of heated or cooled water of artificial origin shall be maintained.

(ii) Temperature criteria applicable to industrial cooling water recycling reservoirs that meet the requirements for classification presented in K.A.R. 28-16-28d(b)(2) shall be established by the department on a case-by-case basis.

(F) Toxic substances.

(i) Conditions of acute toxicity shall not occur in classified surface waters outside of zones of initial dilution, nor shall conditions of chronic toxicity occur in classified surface waters outside of mixing zones.

(ii) Acute criteria for the aquatic life support use given in tables 1a, 1b, and 1c of K.A.R. 28-16-28e(d) shall apply beyond the zone of initial dilution. Chronic criteria for the aquatic life support use given in tables 1a, 1b, 1d, and 1e of K.A.R. 28-16-28e(d) shall apply beyond the mixing zone.

(iii) When a discharge contains a toxic substance that lacks any published criteria for the aquatic life support use, or when a discharge contains a mixture of toxic substances capable of additive or synergistic interactions, bioassessment methods and procedures shall be used by the department to establish whole-effluent toxicity limitations that are consistent with paragraph (2)(F)(i) of this subsection.

(3) Domestic water supply use.

(A) Except as provided in K.A.R. 28-16-28e(c)(3)(B), criteria listed in Table 1a of K.A.R. 28-16-28e(d) for domestic water supply use shall not be exceeded at any point of domestic water supply diversion.

(B) In stream segments where background concentrations of naturally occurring substances, including chlorides and sulfates, exceed the domestic water supply criteria listed in Table 1a of K.A.R. 28-16-28e(d), at ambient flow, due to intrusion of mineralized groundwater, the existing water quality shall be maintained, and the newly established numeric criteria for domestic water supply shall be the background concentration, as defined in K.A.R. 28-16-28b(f). Background concentrations shall be established using the methods outlined in the "Kansas implementation procedures: surface water," dated September 15, 2000, available upon request from the department.

(C) Any substance derived from an artificial source that, alone or in combination with other synthetic or naturally occurring substances, causes toxic, carcinogenic, teratogenic, or mutagenic effects in humans shall be limited to nonharmful concentrations in surface waters. Unless site-specific water quality conditions warrant the promulgation of more protective criteria under the provisions of K.A.R. 28-16-28e(a) and K.A.R. 28-16-28f(f), maximum contaminant levels for toxic, carcinogenic, teratogenic, or mutagenic substances promulgated by the United States environmental protection agency pursuant to section 300g-1 of the federal safe drinking water act, 42 U.S.C. 300f through 300j-9, as amended on August 6, 1996, shall be deemed nonharmful by the department and adopted as domestic water supply criteria.

(4) Food procurement use.

(A) Criteria listed in Table 1a of K.A.R. 28-16-28e(d) for food procurement use shall not be exceeded outside of a mixing zone due to any artificial source of pollution.

(B) Substances that can bioaccumulate in the tissues of edible aquatic or semiaquatic life or wildlife through bioconcentration or biomagnification shall be limited in surface waters to concentrations that result in no harm to human consumers of these tissues. For bioaccumulative carcinogens, surface water concentrations corresponding to a cancer risk level of less than 0.000001 (10^{-6}) in human consumers of aquatic or semiaquatic life or wildlife shall be deemed nonharmful by the department and adopted as food procurement criteria. Average rates of tissue consumption and lifetime exposure shall be assumed by the department in the estimation of the cancer risk level.

(5) Groundwater recharge use. In surface waters designated for the groundwater recharge use, water quality shall be such that, at a minimum, degradation of groundwater quality does not occur. Degradation shall include any statistically significant increase in the concentration of any chemical or radiological contaminant or infectious microorganism in groundwater resulting from surface water infiltration or injection.

(6) Industrial water supply use. Surface water quality criteria for industrial water supplies shall be determined by the department on a case-by-case basis.

(7) Recreational use.

(A) General. The introduction of plant nutrients into surface waters designated for primary or secondary contact recreational use shall be controlled to prevent the development of objectionable concentrations of algae or algal by-products or nuisance growths of submersed, floating, or emergent aquatic vegetation.

(B) Primary contact recreation. Artificial sources of pollution shall not cause concentrations of fecal coliform bacteria in surface waters designated for primary contact recreational use to exceed a geometric mean of 200 organisms per 100 milliliters beyond the mixing zone. Calculation of the geometric mean shall be based on the analysis of at least five consecutive samples collected during separate 24-hour periods. No sample shall exceed 900 organisms per 100 milliliter sample. These criteria shall be in effect from April 1 through October 31 of each year. The concentration of fecal coliform bacteria in surface waters designated for primary contact recreation shall not exceed 2,000 organisms per 100 milliliters beyond the mixing zone, from November 1 through March 31 of each year.

(C) Secondary contact recreation. Artificial sources of pollution shall not cause concentrations of fecal coliform bacteria in surface waters designated for secondary contact recreational use to exceed 2,000 organisms per 100 milliliters beyond the mixing zone. This criterion shall be in effect from January 1 through December 31 of each year.

(D) Wastewater effluent shall be disinfected if it is determined by the department that the discharge of nondisinfected wastewater constitutes an actual or potential threat to public health. Situations that constitute an actual or potential threat to public health shall include instances in which there is a reasonable potential for the discharge to exceed the applicable criteria supporting the assigned recreational use designation or if a water body is known or likely to be used for either of the following:

(i) Primary or secondary contact recreation; or

(ii) any domestic water supply.

(8) Multiple uses. If a classified surface water or surface water segment is designated for more than one beneficial use pursuant to K.A.R. 28-16-28d(c), the water quality of the surface water or surface water segment shall comply with the most stringent of the applicable water quality criteria.

(d) Tables.

Table 1a. Numeric criteria.

	USE CATEGORY					
	AQUATIC LIFE		AGRICULTURE		PUBLIC HEALTH	
PARAMETER	ACUTE	CHRONIC	LIVESTOCK	IRRIGATION	PROCUREMENT	WATER SUPPLY
RADIONUCLIDES (pCi/L)						
gross beta radioactivity	a	a	a	a	a	50
gross alpha particles including radium-226, but not radon or uranium	a	a	a	a	a	15
radium 226 and 228 combined	a	a	a	a	a	5
strontium 90	a	a	a	a	a	8
tritium	a	a	a	a	a	20,000
METALS (µg/L)						
antimony, total	88	30	a	a	4,300	6
arsenic, total	340	50	200	100	20.5	b
arsenic (III)	360	50	a	a	b	b
arsenic (V)	850	48	a	a	a	a
barium	a	a	a	a	a	2,000
beryllium, total	130	5.3	a	100	0.13	4
boron, total	a	a	5,000	750	a	a
cadmium, total	table 1b	table 1b	20	10	170	5
chromium, total	a	40	1,000	100	a	100
chromium (III)	table 1b	table 1b	a	a	3,433,000	50
chromium (VI)	15	10	a	a	3,400	50
copper, total	table 1b	table 1b	500	200	a	1,300
lead, total	table 1b	table 1b	100	5,000	a	15
mercury,	total2.	10.01	210	a	0.146	b
nickel, total	table 1b	table 1b	500	200	100	100
selenium, total	20	5	50	20	6,800	50
selenium (V)	11.2	a	a	a	a	a

	USE CATEGORY					
	AQUATIC LIFE		AGRICULTURE		PUBLIC HEALTH	
PARAMETER	ACUTE	CHRONIC	LIVESTOCK	IRRIGATION	PROCUREMENT	WATER SUPPLY
silver, total	table 1b	a	a	a	a	50
thallium,total	1,400	40	a	a	b	2
zinc, total	table 1b	table 1b	25,000	2,000	a	a
OTHER INORGANIC SUBSTANCES (µg/L)						
ammonia	table 1c	table c	a	a	a	a
asbestos (µfibers/L)	a	a	a	a	a	7,000,00
chloride	860,000	352,000	a	a	a	250,000
chlorine, total residual	19	11	a	a	a	a
cyanide (free)	22	5.2	a	a	220,000	200
fluoride	a	a	2,000	1,000	a	2,000
nitrate (as N)	a	a	a	a	a	10,000
nitrite + nitrate (as N)	a	a	100,000	a	a	10,000
phosphorus, elemental (white)	a	0.1	a	a	a	a
sulfate	a	a	1,000,000	a	a	250,000
ORGANIC SUBSTANCES (µg/L)						
Benzenes.						
aminobenzene (analine)	14	6.7	a	a	a	a
benzene	5,300	a	a	a	40	b
chlorobenzene	250	50	a	a	21,000	100
dichlorobenzenes, total	1,120	763	a	a	2,600	a
o-dichlorobenzene	1,120	763	a	a	2,600	600
m-dichlorobenzene	1,120	763	a	a	2,600	b
p-dichlorobenzene	a	a	a	a	2,600	75
other chlorinated benzenes, total	250	50	a	a	a	a
1,2,4-trichlorobenzene	250	a	a	a	a	70
1,2,4,5-tetrachlorobenzene	250	50	a	a	48	a
pentachlorobenzene	250	50	a	a	85	a
hexachlorobenzene	6.0	3.7	a	a	0.00074	b
ethylbenzene	32,000	a	a	a	28,718	700
nitrobenzene	27,000	a	a	a	1,900	b
pentachloronitrobenzene	250	50	a	a	a	a
vinylbenzene (styrene)	a	a	a	a	a	100

	USE CATEGORY					
	AQUATIC LIFE		AGRICULTURE		PUBLIC HEALTH	
PARAMETER	ACUTE	CHRONIC	LIVESTOCK	IRRIGATION	PROCUREMENT	WATER SUPPLY
Ether						
chloroalkyl ethers, total	238,000	a	a	a	a	a
bis(2-chloroethyl)ether	238,000	a	a	a	1.36	b
bis(2-chloroisopropyl)ether	238,000	a	a	a	0.00184	b
bis(chloromethyl)ether	238,000	a	a	a	0.00184	a
2-chloroethyl vinyl ether	360	120	a	a	a	a
halogenated ethers, total	360	122	a	a	a	a
chloromethyl methyl ether	238,000	a	a	a	0.00184	a
4,4'-dibromodiphenyl ether	360	120	a	a	a	a
hexabromodiphenyl ether	360	120	a	a	a	a
nonabromodiphenyl ether	360	120	a	a	a	a
pentabromodiphenyl ether	360	120	a	a	a	a
tetrabromodiphenyl ether	360	120	a	a	a	a
tribromodiphenyl ether	360	120	a	a	a	a
Halogenated Hydrocarbons						
chlorinated ethanes						
1,2-dichloroethane	18,000	2,000	a	a	b	b
1,1,1-trichloroethane	18,000	a	a	a	173,077	200
1,1,2-trichloroethane	18,000	9,400	a	a	41.8	b
tetrachloroethanes, total	9,320	a	a	a	a	a
1,1,1,2-tetrachloroethane	9,320	a	a	a	a	a
1,1,2,2-tetrachloroethane	9,320	2,400	a	a	10.7	b
pentachloroethane	7,240	1,100	a	a	a	a
hexachloroethane	980	540	a	a	8.74	b
chlorinated ethylenes, total	11,600	a	a	a	1.85	a
1,1-dichloroethylene	11,600	a	a	a	1.85	b
cis-1,2-dichloroethylene	11,600	a	a	a	1.85	70
trans-1,2-dichloroethylene	11,600	a	a	a	140,000	100
trichloroethylene	45,000	21,900	a	a	80.7	b
tetrachloroethylene	5,280	840	a	a	8.85	b
chlorinated propanes/propenes						
1,2-dichloropropane	23,000	5,700	9.0	a	39	5
1,3-dichloropropene	6,600	244	a	a	14.1	b
Other Halogenated Hydrocarbons						

	USE CATEGORY					
	AQUATIC LIFE		AGRICULTURE		PUBLIC HEALTH	
PARAMETER	ACUTE	CHRONIC	LIVESTOCK	IRRIGATION	PROCUREMENT	WATER SUPPLY
halogenated methanes, total	11,000	a	a	a	15.7	100
bromomethane	11,000	a	a	a	15.7	b
1,2-dibromoethane	a	a	a	a	a	0.05
tribromomethane (bromoform)	11,000	a	a	a	15.7	b
bis(2-chloroethoxy) methane	11,000	a	a	a	15.7	a
bromodichloromethane	11,000	a	a	a	15.7	b
bromochloromethane	11,000	a	a	a	15.7	a
bromotrichloromethane	11,000	a	a	a	15.7	a
dibromochloromethane	11,000	a	a	a	15.7	b
dibromochloropropane	a	a	a	a	15.7	0.2
dibromodichloromethane	11,000	a	a	a	15.7	a
dichlorodifuoromethane	11,000	a	a	a	15.7	a
dichloromethane (methylene chloride)	11,000	a	a	a	1,600	4.7
trichloromethane (chloroform)	28,900	1,240	a	a	15.7	b
tribromochloromethane	11,000	a	a	a	15.7	a
trichlorofluoromethane	11,000	a	a	a	15.7	a
tetrachloromethane (carbon tetrachloride)	35,200	a	a	a	b	b
di(2-ethylhexl)adipate	a	a	a	a	a	500
hexachlorobutadiene	90	9.3	a	a	50	b
hexachlorocyclopentadiene	7	5.2	a	a	206	50
vinyl chloride	a	a	a	a	525	2
Miscellaneous Organics						
dioxin (2,3,7,8 TCDD)	0.01	0.00001	a	a	0.000000014	b
isosphorone	117,000	a	a	a	b	b
polychlorinated biphenyls, total	2	0.014	a	a	0.0000079	b
tributyltin oxide	0.149	0.026	a	a	a	a
Nitrogen Compounds						
nitrosamines, total	5,850	a	a	a	1.24	a
N-nitrosodibutylamine	5,850	a	a	a	0.587	a
N-nitrosodiethanolamine	5,850	a	a	a	1.24	a
N-nitrosodiethylamine	5,850	a	a	a	1.24	a
N-nitrosodimethylamine	5,850	a	a	a	1.6	b
N-nitrosodiphenylamine	5,850	a	a	a	16.0	b

	USE CATEGORY					
	AQUATIC LIFE		AGRICULTURE		PUBLIC HEALTH	
PARAMETER	ACUTE	CHRONIC	LIVESTOCK	IRRIGATION	PROCUREMENT	WATER SUPPLY
N-nitrosodi-n-propylamine	a	a	a	a	1.24	a
N-nitrosopyrrolidine	5,850	a	a	a	91.9	a
acrylonitrile	7,550	2,600	a	a	0.65	b
benzidene	2,500	a	a	a	0.000535	b
3,3'-dichlorobenzidine	a	a	a	a	0.02	b
1,2-diphenyl hydrazine	270	a	a	a	0.54	b
Polynuclear Aromatic Hydrocarbons, total	a	a	a	a	0.0311	0.2
acenaphthene	1,700	520	a	a	a	1200
acenaphthylene	a	a	a	a	0.0311	a
anthracene	a	a	a	a	0.0311	b
benzo(a)anthracene	a	a	a	a	0.0311	b
benzo(a)pyrene	a	a	a	a	0.0311	b
benzo(b)fluoranthene	a	a	a	a	0.0311	b
benzo(g,h,i)perylene	a	a	a	a	0.0311	a
benzo(k)fluoranthene	a	a	a	a	0.0311	b
chrysene	a	a	a	a	0.0311	b
dibenzo(a,h)anthracene	a	a	a	a	0.0311	b
fluoranthene	3,980	a	a	a	b	b
fluorene	a	a	a	a	0.0311	b
ideno(1,2,3-cd)pyrene	a	a	a	a	0.0311	b
naphthalene	2,300	620	a	a	a	a
phenanthrene	30	6.3	a	a	0.0311	a
pyrene	a	a	a	a	0.0311	b
Phthalate Esters						
phthalates, total	940	3	a	a	a	a
butylbenzyl phthalate	a	a	a	a	5,200	100
di(2-ethylhexyl)phthalate	400	360	a	a	b	b
dibutyl phthalate	940	3	a	a	b	b
diethyl phthalate	a	a	a	a	b	5
dimethyl phthalate	940	3	a	a	2,900,000	b
Phenolic Compounds						
phenol	10,200	2,560	a	a	4,600,000	b
2,4-dimethyl phenol	1,300	530	a	a	2,300	540

	USE CATEGORY					
	AQUATIC LIFE		AGRICULTURE		PUBLIC HEALTH	
PARAMETER	ACUTE	CHRONIC	LIVESTOCK	IRRIGATION	PROCUREMENT	WATER SUPPLY
chlorinated phenols						
2-chlorophenol	4,380	2,000	a	a	400	120
3-chlorophenol	a	a	a	a	29,000	a
2,4-dichlorophenol	2,020	365	a	a	b	b
2,4,5-trichlorophenol	100	63	a	a	a	a
2,4,6-trichlorophenol	a	970	a	a	3.6	b
pentachlorophenol	table 1b	table 1b	a	a	8.2	b
3-methyl-4-chlorophenol	30	a	a	a	a	a
nitrophenols, total	230	150	a	a	a	a
2,4-dinitrophenol	a	a	a	a	765	b
4,6-dinitro-o-cresol	a	a	a	a	765	b
Toluenes						
toluene	17,500	a	a	a	b	1,000
dinitrotoluenes, total	330	230	a	a	9.1	a
2,4-dinitrotoluene	330	230	a	a	9.1	b
xylene	a	a	a	a	a	10,000
PESTICIDES (µg/L)						
acrolein	68	21	a	a	780	320
acrylamide	a	a	a	a	a	0.01
alachlor (lasso)	760	76	100	a	a	2
aldicarb	a	a	a	a	a	3
aldicarb sulfone	a	a	a	a	a	2
aldicarb sulfoxide	a	a	a	a	a	3
aldrin	3	0.001	1	a	0.000079	b
atrazine (aatrex)	170	3	a	a	a	3
bromoxynil (MCPA)	a	a	20	a	a	a
carbaryl (sevin)	a	0.02	100	a	a	a
carbofuran (furadan)	a	a	100	a	a	40
chlordane	2.4	0.0043	3	a	0.00048	b
chlorpyrifos	0.083	0.041	100	a	a	a
2,4-D	a	a	a	a	a	70
dacthal (DCPA)	a	14,300	a	a	a	a
dalapon	a	110	a	a	a	200

	USE CATEGORY					
	AQUATIC LIFE		AGRICULTURE		PUBLIC HEALTH	
PARAMETER	ACUTE	CHRONIC	LIVESTOCK	IRRIGATION	PROCUREMENT	WATER SUPPLY
diazinon (spectracide)	a	0.08	100	a	a	a
DDT and Metabolites						
4,4'-DDE (p,p'-DDE)	1,050	a	a	a	0.00059	b
4,4'-DDD (p,p'-DDD)	a	a	a	a	0.00084	b
DDT, total	1.1	0.001	50	a	0.000024	b
dieldrin	1.0	0.0019	1	a	0.000076	b
dinoseb (DNBP)	a	a	a	a	a	7
diquat	a	a	a	a	a	20
disulfoton (disyston)	a	a	100	a	a	a
endosulfan, total	0.22	0.056	a	a	159	b
alpha-endosulfan	0.22	0.056	a	a	240	110
beta-endosulfan	0.22	0.056	a	a	240	110
endosulfan sulfate	a	a	a	a	b	b
endothall	a	a	a	a	a	100
endrin	0.18	0.0023	0.5	a	0.81	0.76
endrin aldehyde	a	a	a	a	0.81	b
epichlorohydrin	a	a	a	a	a	4
ethylene dibromide	a	a	a	a	a	0.05
fenchlorfos (ronnel)	a	a	100	a	a	a
glyphosate (roundup)	a	a	a	a	a	700
guthion	a	0.010	100	a	a	a
heptachlor	0.52	0.0038	0.1	a	0.00021	b
heptachlor epoxide	0.52	0.0038	0.1	a	b	b
hexachlorocyclohexane	100	a	a	a	a	a
alpha-HCH	100	a	a	a	0.0031	b
beta-HCH	100	a	a	a	b	b
delta-HCH	100	a	a	a	a	a
gamma-HCH (lindane)	2	0.08	5	a	0.0625	b
technical-HCH	a	a	a	a	0.0414	a
malathion	a	0.10	100	a	a	a
methoxychlor	a	0.03	1,000	a	a	40
methyl parathion	a	a	100	a	a	a
metribuzin (sencor)	a	100	a	a	a	a
mirex	a	0.001	a	a	0.000097	a

	USE CATEGORY					
	AQUATIC LIFE		AGRICULTURE		PUBLIC HEALTH	
PARAMETER	ACUTE	CHRONIC	LIVESTOCK	IRRIGATION	PROCUREMENT	WATER SUPPLY
oxamyl (vydate)	a	a	a	a	a	200
parathion	0.065	0.013	100	a	a	a
picloram (tordon)	a	a	a	a	a	500
propachlor (ramrod)	a	8	a	a	a	a
simazine (princep)	a	a	10	a	a	4
toxaphene	0.73	0.0002	5	a	0.00073	b
2,4,5-T	a	a	2	a	a	a
2,4,5-TP (silvex)	a	a	a	a	a	50

a - criterion not available.
b - US EPA has promulgated criterion for Kansas under the Code of Federal Regulations, Title 40, Part 131.36

Table 1b. Formulae for calculation of hardness-dependent aquatic life support criteria for chromium III and total cadmium, total copper, total lead, total nickel, total silver and total zinc and pH-dependent aquatic life support criteria for pentachlorophenol. A WER value of 1.0 is applied in the hardness-dependent equations for total metals unless a site-specific WER has been determined and adopted by the department in accordance with K.A.R. 28-16-28e(a) and K.A.R. 28-16-28f(f). Hardness values in metal formulae are entered in units of mg/L as $CaCO_3$. Pentachlorophenol formulae apply only over the pH range 6.5-8.5.

CADMIUM (ug/L):
acute criterion = WER[EXP[(1.1280*(LN(hardness)))-3.6867]]
chronic criterion = WER[EXP[(0.7852*(LN(hardness)))-2.715]]

CHROMIUM III (ug/L):
acute criterion = WER[EXP[(0.819*(LN(hardness)))+3.7256]]
chronic criterion = WER[EXP[(0.819*(LN(hardness)))+0.6848]]

COPPER (ug/L):
acute criterion = WER[EXP[(0.9422*(LN(hardness)))-1.700]]
chronic criterion = WER[EXP[(0.8545*(LN(hardness)))-1.702]]

LEAD (ug/L):
acute criterion = WER[EXP[(1.273*(LN(hardness)))-1.460]]
chronic criterion = WER[EXP[(1.273*(LN(hardness)))-4.705]]

NICKEL (ug/L):
acute criterion = WER[EXP[(0.846*(LN(hardness)))+2.255]]

Tab1e 1c. pH-dependent acute aquatic life criteria for total ammonia (total ammonia as N, mg/L).

Acute Aquatic Life Criteria for Ammonia, mg/L	
pH	Criteria
6.5	48.8
6.6	46.8
6.7	44.6
6.8	42.0
6.9	39.1
7.0	36.1
7.1	32.8
7.2	29.5
7.3	26.2
7.4	23.0
7.5	19.9
7.6	17.0
7.7	14.4
7.8	12.1
7.9	10.1
8.0	8.40
8.1	6.95
8.2	5.72
8.3	4.71
8.4	3.88
8.5	3.20
8.6	2.65
8.7	2.20
8.8	1.84
8.9	1.56
9.0	1.32

Tab1e 1d. pH- and temperature-dependent chronic aquatic life criteria for total ammonia (total ammonia as N, mg/L) with early life stages of fish present.

Chronic Aquatic Life Criteria for Ammonia, Early Life Stages Present, mg/L										
pH	Temperature, EC									
	0	**14**	**16**	**18**	**20**	**22**	**24**	**26**	**28**	**30**
6.5	6.67	6.67	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	6.57	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	6.44	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	6.29	9.29	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	6.12	6.12	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.91	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.67	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	5.39	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	5.08	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.73	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	4.36	4.36	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.98	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.58	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.18	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.80	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.43	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	2.10	2.10	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	1.79	1.79	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	1.52	1.52	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	1.29	1.29	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	1.09	1.09	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.920	0.920	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	0.778	0.778	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.661	0.661	0.601	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	0.565	0.565	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0	0.486	0.486	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

Tab1e 1e. pH- and temperature-dependent chronic aquatic life criteria for total ammonia (total ammonia as N, mg/L) with early life stages of fish absent.

Chronic Aquatic Life Criteria for Ammonia, Early Life Stages Absent*, mg/L								
pH	Temperature, EC							
	0-7	**8**	**9**	**10**	**11**	**12**	**13**	**14****
6.5	10.8	10.1	9.51	8.92	8.36	7.84	7.35	6.89
6.6	10.7	9.99	9.37	8.79	8.24	7.72	7.24	6.79
6.7	10.5	9.81	9.20	8.62	8.08	7.58	7.11	6.66
6.8	10.2	9.58	8.98	8.42	7.90	7.40	6.94	6.51
6.9	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33
7.0	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11
7.1	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86
7.2	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57
7.3	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25
7.4	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89
7.5	1.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51
7.6	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11
7.7	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70
7.8	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29
7.9	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89
8.0	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52
8.1	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17
8.2	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85
8.3	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58
8.4	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33
8.5	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13
8.6	1.49	1.40	1.31	1.23	1.15	1.08	1.01	0.951
8.7	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805
8.8	1.07	1.01	0.944	0.885	0.829	0.778	0.729	0.684
8.9	0.917	0.860	0.806	0.456	0.709	0.664	0.623	0.584
9.0	0.790	0.740	0.694	0.651	0.610	0.572	0.536	0.503

*Early life stage absent criteria will apply to all Kansas surface waters during the months November through February except in surface water segments listed in Table 1f. The application of early life stage absent criteria outside of the months November through February will require a segment-specific examination of the surface water for the presence of early life stages of fish.

** At 15 E C and above, the criterion for early life stages absent is equivalent to the criterion for early life stages present.

Table 1f. Surface Water Segments where early life stages absent chronic aquatic life criteria are not appliable.

Surface Water	Basin	Subbasin	Hydrologic Unit Code	Segment Number
Kansas River	Kansas Lower Republican	Lower Kansas	10270104	1
Kansas River	Kansas Lower Republican	Lower Kansas	10270104	2
Kansas River	Kansas Lower Republican	Lower Kansas	10270104	3
Kansas River	Kansas Lower Republican	Lower Kansas	10270104	4
Kansas River	Kansas Lower Republican	Lower Kansas	10270104	5
Kansas River	Kansas Lower Republican	Lower Kansas	10270104	18
Kansas River	Kansas Lower Republican	Lower Kansas	10270104	19
Kansas River	Kansas Lower Republican	Lower Kansas	10270104	21 From Bowersock dam east to segment 19
Missouri River	Missouri	Tarkio-Wolf	10240005	1
Missouri River	Missouri	Tarkio-Wolf	10240005	2
Missouri River	Missouri	Tarkio-Wolf	10240005	19
Missouri River	Missouri	Tarkio-Wolf	10240005	20
Missouri River	Missouri	Tarkio-Wolf	10240005	21
Missouri River	Missouri	Independence-Sugar	10240011	1
Missouri River	Missouri	Independence-Sugar	10240011	2
Missouri River	Missouri	Independence-Sugar	10240011	4
Missouri River	Missouri	Independence-Sugar	102400115	5
Missouri River	Missouri	Independence-Sugar	10240011	7
Missouri River	Missouri	Independence-Sugar	10240011	9
Missouri River	Missouri	Independence-Sugar	10240011	11
Missouri River	Missouri	Independence-Sugar	10240011	13
Missouri River	Missouri	Independence-Sugar	10240011	15
Missouri River	Missouri	Independence-Sugar	10240011	19

(Authorized by K.S.A. 1999 Supp. 65-171d and K.S.A. 65-171m; implementing K.S.A. 1999 Supp. 65-165 and 65-171d, and K.S.A. 65-171m; effective May 1, 1986; amended, T-87-8, May 1, 1986; amended May 1, 1987; amended Aug. 29, 1994; amended July 30, 1999; amended November 3, 2000.

28-16-28f. Administration of surface water quality standards.

(a) Review and revision. At least once every three years, a public hearing shall be held for the purpose of reviewing and, as appropriate, modifying the surface water quality standards and the surface water register.

(b) Application of modified surface water quality standards. A modification to the surface water quality standards, the surface water register, or both, shall have no effect on the requirements of any existing enforceable discharge permit issued under K.S.A. 65-165, and amendments thereto, unless the discharge fails to meet the requirements of the permit or the department has reason to believe that continuation of the discharge will result in a potential or actual public health hazard or in irreversible water use impairments.

(c) Water quality certification. No action identified below shall be taken unless the department has issued a water quality certification for the following:

(1) Any action requiring a federal license or permit pursuant to the federal clean water act;

(2) any action subject to the permitting provisions of K.S.A. 65-165, and amendments thereto;

(3) any water development project subject to the provisions of K.S.A. 82a-325 et seq., and amendments thereto; and

(4) any action undertaken by any Kansas state agency that, in the opinion of the department, has a potential water quality impact.

(d) Compliance schedules.

(1) Except as provided in K.A.R. 28-16-28f(d)(2), compliance schedules contained in any discharge permit or license issued by the department pursuant to the federal clean water act or K.S.A. 65-165, and amendments thereto, shall not extend more than three years beyond the date of permit issuance.

(2) Compliance schedules of up to five years in total duration may be granted if it is demonstrated, to the department's satisfaction, that the strict application of K.A.R. 28-16-28f(d)(1) is not feasible due to construction scheduling constraints or other technical limitations.

(e) Variances. If, upon written application by any person, the department finds that by reason of substantial and widespread socioeconomic impact the strict enforcement of the water quality criteria of K.A.R. 28-16-28e(c) is not feasible, a variance may be permitted by the department.

(1) The provisions of 40 C.F.R. 131.10(g), as in effect on July 1, 1996 and hereby adopted by reference, shall be considered by the department in reviewing the need for a variance.

(2) In granting a variance, conditions and time limitations may be set by the department with the intent that progress be made toward improvements in surface water quality.

(3) Each variance shall be granted only after public notification and opportunity for public comment. Each variance, once granted, shall be adopted into the regulations at the next systematic review or subsequent triennial review.

(4) No action that impacts upon water quality shall be granted a variance from the terms and conditions of K.A.R. 28-16-28e(b).

(f) Site-specific criteria. Whenever the department proposes to use any site-specific criterion, a public notice stating the intention to use a site-specific criterion shall be issued by the department. The public notice shall include a description of the affected surface water or surface water segment and the reasons for applying the proposed criterion. If the department determines that there is significant public interest, a public hearing shall be held in the geographical vicinity of the affected surface water or surface water segment. A public notice of the final site-specific criterion shall be published in the Kansas register. Each site-specific criterion, once developed, shall be adopted into the regulations at the next systematic review or subsequent triennial review.

(g) Enforcement. Upon finding a violation of the surface water quality standards, an investigation to determine the cause of the violation shall be conducted by the department. If the department finds the violation to be caused by an artificial source of pollution, the person or persons responsible for the source of pollution shall be required by the department to initiate corrective actions that restore the designated uses of the affected surface water or surface water segment impaired by the violation and provide for the return of the original surface water quality conditions. Nothing in this regulation shall abridge the right of the department to proceed with enforcement actions as provided in other Kansas statutes, regulations, or both. (Authorized by K.S.A. 1998 Supp. 65-171d and K.S.A. 65-171m; implementing K.S.A. 1998 Supp. 65-165 and 65-171d, and K.S.A. 65-171m; effective May 1, 1986; amended Aug. 29, 1994; amended July 30, 1999.)

KANSAS IMPLEMENTATION PROCEDURES

SURFACE WATER

Prepared by The Kansas Department of Health and Environment

Bureau of Water

June 1, 1999

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These written procedures provide a uniform mechanism for drafting National Pollutant Discharge Elimination System (NPDES) permits and Kansas Water Pollution Control permits to meet Kansas Surface Water Quality Standards in classified water bodies. These procedures also provide a uniform mechanism for implementing the antidegradation policy, as established at K.A.R. 28-16-28c(a), in all activities regulated by the state.

I. Water Quality Standards

A. Anti-Degradation

Applicable Regulations: 28-16-28b(a)
28-16-28c(a)

EPA's water quality standards regulations require States to adopt and implement an antidegradation policy containing the minimum requirements for such a policy. The antidegradation policy is a component of the Surface Water Quality Standards in the State's overall water quality program.

The intent of the antidegradation policy is to limit discharges and other activities that will negatively impact water quality, impair beneficial uses, or threaten to impair beneficial uses of surface waters. The antidegradation policy provides a baseline level of protection relative to established water quality criteria to all classified surface waters, and a higher level of protection to those waterbodies recognized as unique ecologically, highly valued for its resources, or having high water quality.

The federal antidegradation guidance presents three tiers for maintaining and protecting water quality and beneficial uses.

1. The first tier provides a "floor" which protects existing uses. Water quality must be preserved to protect and maintain those existing uses. Activities that would lower

water quality below levels necessary to maintain existing uses are prohibited.

2. The second tier provides protection to high quality waters where water quality exceeds the criteria associated with the assigned designated uses. Limited water quality degradation is allowed in high quality waters where the degradation is necessary to accommodate important social or economic development, but only if beneficial uses are still maintained. Public participation is required before allowing a lowering of water quality.

3. The third tier provides special protection for outstanding resource waters, such as those waters in National and State Parks, wildlife refuges, outstanding fisheries, and other waters of unique recreational or ecological value. Although activities that may create temporary reductions in water quality are allowed, any activities that would permanently lower water quality is these surface waters is forbidden.

Kansas provides protection to classified surface waters equivalent to the three tiers listed above in the Outstanding National Resource Water and General Purpose Water classifications described below. Additionally, Kansas provides a level of protection frequently referred to as tier 2½, to waters classified as Exceptional State Waters, also described below.

During development of a new permit, or when considering an increase in treatment capacity or discharge volume, or the discharge of additional pollutants to an existing permit, the Department will determine effluent limitations to maintain both the existing water quality conditions and also those necessary to maintain existing uses and achieve stream designated uses.

1. Outstanding National Resource Water

If the receiving surface water is classified as an Outstanding National Resource Water (ONRW), new or expanded discharges will not be allowed.

2. **Exceptional State Water**

If the receiving surface water is classified as an Exceptional State Water, the permit limits derived must provide protection to existing uses and existing water quality. Designated uses must be protected and maintained once a designated use is realized. Permit limits for discharges to Exceptional State Waters will typically require maintenance of existing water quality. Existing water quality may be lowered only if the Department determines that there is an important social or economic need to lower existing water quality, as demonstrated through the guidelines provided in EPA's guidance document "Interim Economic Guidance for Water Quality Standards, March 1995" (EPA-823-b-95-002).

3. **General Purpose Water**

If the receiving surface water is classified as a General Purpose Water, the permit limits derived must provide protection of existing uses (Tier 1 and Tier 2 waters). Where existing water quality in General Purpose Waters exceeds water quality criteria set forth in the regulations, the existing water quality will be maintained and protected (Tier 2 waters). Existing water quality may be lowered only if the Department determines that there is an important social or economic need to lower existing water quality, as demonstrated through the guidelines provided in EPA's guidance document "Interim Economic Guidance for Water Quality Standards, March 1995" (EPA-823-b-95-002).

However, if after satisfaction of public participation and intergovernmental coordination requirements, a determination is made by the Department, based on important economic and social development of the area, degradation of existing water quality conditions in exceptional state waters or general purpose waters is acceptable and will maintain existing and attained designated uses, the lower water quality will be allowed. If a determination is

made by the Department that a lowering of water quality is acceptable but will not preserve water quality conditions necessary to maintain designated uses, then KDHE may initiate a process for changing the designation as stated in K.A.R. 28-16-28d(c)(1).

When measurable surface water quality degradation is considered, the following statement will be included in the permit public notice:

> "This permit will allow a measurable increase in certain pollutant parameters above existing water quality, but not above concentrations necessary to maintain existing and designated uses (and if applicable ... and to protect designated critical habitat for threatened and endangered species)."

Public comment is invited during the permit public notice period for reconsideration or support of the Department action. In the event of significant public interest or concern, KDHE will conduct a public hearing on the proposed permitting action.

Certain activities, such as the construction, installation or maintenance of roads, bridges, pipelines, water intakes, dikes, levees or dams, may entail a temporary and localized lowering of surface water quality that would not, under normal circumstances, pose a significant long-term risk to the existing or designated uses of the impacted surface water. Such activities may be allowed by KDHE provided reasonable precautions (i.e., pollution control practices) are taken to minimize the impact of the activities on surface water quality.

Where an intentional or unintentional release of pollutants from a point source results in contamination or potential contamination of an alluvial aquifer that threatens to preclude attainment of the designated use of the alluvial aquifer or its associated surface water, the antidegradation provisions of the Kansas Surface Water Quality Standards shall apply.

Any new or expanded source of pollution subject to the interagency review provisions of the Kansas Environmental Coordination Act or Section 404 of the Federal Clean Water Act and

requiring a permit, license, or certification from KDHE to discharge wastewater must undergo a formal certification review by KDHE. The certification will ensure that (1) the source of pollution will not violate any of the terms or conditions of the Kansas Surface Water Quality Standards or the Federal Clean Water Act and (2) all applicable minimum standards of design and minimum pollution control practices are used to minimize the impact of the pollution source on surface water quality.

KDHE may allow a new or expanded source of thermal pollution to discharge into a classified surface water provided that (1) the source of pollution meets all applicable technological effluent limitations and minimum standards of design, (2) the discharge will not violate any of the aquatic life support criteria of K.A.R. 28-16-28e(c)(2), and (3) any lowering of surface water quality resulting from the discharge is, in the judgement of the Director, necessary for the accommodation of important social and economic growth in the geographical vicinity of the discharge. KDHE will not allow any thermal pollution to discharge into any outstanding national resource water or to result in any harmful effects on populations of threatened or endangered species or critical habitat, as defined in the Federal Endangered Species Act (PL 93-205) as amended through October 7, 1988, or in K.S.A. 1991 Supp. 32-960 and K.A.R. 115-15-3.

Surface waters classified as Outstanding National Resource Waters are waters deemed, by the department or the public, to have high recreational or ecological value. These waters are generally located in national or state parks, federal or state game reserves, or are waters that are ecologically unique. KDHE classifies these waters as ONRWs to protect the extraordinary and uncommon nature of the ecosystems. KDHE acknowledges that there may be certain waters in the state that are deserving of this classification but have not yet been given the classification. KDHE encourages the public to take the opportunity to nominate waters it believes are deserving of the ONRW classification.

If the public believes there are certain waters that are deserving of reclassification, then the person(s) must contact KDHE in writing requesting the surface water be reclassified an ONRW. The request should state the exact location of the surface water and the resource,

unique ecosystem, or special circumstances that justify the reclassification. KDHE will evaluate all available data and information to determine the chemical, physical, and biological integrity of the nominated surface water. Additional studies may be required before KDHE is able to determine if the surface water should be classified as an ONRW.

If KDHE concludes that a nominated surface water is deserving of the ONRW classification, then the public will have an opportunity to comment on the reclassification during a Public Notice period and, if enough interest or concern is raised, a public hearing will be conducted.

B. Surface Water Classification

Applicable Regulations: 28-16-28d(b)

1. Classified Streams

All streams with a mean summer base flow that exceeds 0.003 cubic meters per second are classified streams and a portion of those streams are listed in the Kansas Surface Water Register. Streams with flows less than 0.003 cubic meters per second mean summer base flow but provide important refuge for aquatic and semi-aquatic life are also classified streams.

2. Classified Lakes

All lakes managed by federal, state, county, or municipal entities and those private lakes used for public drinking water supply and open to the general public for secondary contact recreation, are classified lakes and a portion of those lakes are listed in the Kansas Surface Water Register.

3. Classified Wetlands

All wetlands managed by federal, state, county, or municipal entities, those wetlands classified as outstanding national resource waters, exceptional state waters, or designated as special aquatic life use waters, are classified wetlands and a portion of those wetlands are listed in the Kansas Surface Water Register. Those privately owned wetlands open to the general public for hunting, trapping, or other secondary contact recreational activities are also classified wetlands. Artificially created wetlands for wastewater treatment are not considered classified wetlands.

C. Designated Uses

The Department will assign designated uses to state surface waters by conducting a use attainability analysis following the standardized procedures developed by the Department's Bureau of Environmental Field Services. A use attainability analysis may also be conducted by another party following the Department's standardized procedure. If conducted by a another party, the use attainability analysis must be submitted to the Department for review and approval.

1. Agricultural Water Supply Use

Surface waters used for agricultural purposes.

a. Livestock watering. Surface waters may be used for consumption of water by livestock.

b. Irrigation. Surface waters may be withdrawn and used for application onto crop land.

2. Aquatic Life Support Use

Waters used for the maintenance of the ecological integrity of streams, lakes and

wetlands including the aquatic, semi-aquatic, or terrestrial species dependent on surface water for survival.

a. Special Aquatic Life Use. Surface waters that contain unique habitats or biota that are not commonly found in the state. Surface waters that contain populations of threatened or endangered species or are designated as high priority fisheries also may be designated as special aquatic life use waters.

If the receiving stream is designated as a special aquatic life use water, the permit limits derived will maintain existing uses and where attained, designated uses.

If the receiving surface water is designated by the State as critical habitat for threatened or endangered species, the permit limits derived will maintain water quality considered acceptable for continued propagation of the species and maintenance of its habitat.

b. Expected Aquatic Life Use. Surface waters that contain habitats or biota found commonly in the state.

c. Restricted Aquatic Life Use. Surface waters that contain biota in limited abundance or diversity due to the physical quality or availability of habitat compared to more productive habitats in adjacent waters.

3. Domestic Water Supply Use

Surface waters that are used, after appropriate treatment, for a potable water resource.

As used in these regulations, "point of diversion" is the location of a surface water intake structure used for domestic water supply or at the point of water removal from the alluvial aquifer by a well utilizing "groundwater under the influence of

surface water" as defined under K.A.R. 28-15-11(cc).

4. **Food Procurement Use**

Surface waters that are used for obtaining edible aquatic or semi-aquatic life for human consumption.

5. **Groundwater Recharge Use**

Surface waters used for replenishing useable groundwater resources.

6. **Industrial Water Supply Use**

Surface water used for non potable purposes including cooling or process water.

7. **Recreational Use**

Surface water used for primary or secondary contact recreation.

a. Primary Contact Recreation. Surface waters used for recreational purposes where total body immersion is likely and inadvertent ingestion of water is probable. Swimming, boating, mussel harvesting, water skiing, skin diving, and wind surfing are examples of activities considered primary contact recreation.

b. Secondary Contact Recreation. Surface water used for recreational purposes where ingestion of surface water in not probable. Wading, fishing, trapping, and hunting are examples of activities considered secondary contact recreation.

II. The Permitting Process

The discharge of pollutants from point sources to waters of the state is controlled via the issuance of discharge permits. These permits are referred to as Kansas Water Pollution Control Permits or National Pollutant Discharge Elimination System (NPDES) permits. These permits are issued jointly by KDHE and the Environmental Protection Agency. Wastewater permits for treatment facilities that do not discharge to surface waters of the state are referred to as non-overflowing, or non-Q facilities. These permits are issued solely by KDHE. Both discharge and non-overflowing permits are issued under the authority of K.S.A. 65-164 *et seq*. While discharge permits carry pollutant limitations on the effluent, non-overflowing permits do not, as there is not routine, ongoing discharge. Both types of permits may include schedules of compliance and special conditions to prevent, or eliminate pollution.

Permit limits for the discharge of effluent are based on meeting technology-based limits, water-quality criteria, or on best professional judgement (BPJ). Limits are imposed to protect existing uses, achieve designated uses, and limit degradation of existing quality of the waters of the state.

KDHE issues both General and Individual permits. General permits are developed to address particular categories of discharges with similar characteristics. Because the discharges have similar characteristics, they require the same effluent limitations, and permit conditions and sampling regimes.

General permits reduce paperwork, and permit issuance time due to the fact the general permit is placed on public notice one time. Once the general permit becomes final, an entity files a notice of intent (NOI) to discharge. If the applicant qualifies, the permit is issued without further public notice, with the previously approved conditions.

General permits are utilized by KDHE for the following categories of discharges: Stormwater, Hydrostatic Test Discharges from Pipelines and Storage Tanks Exposed to Crude or Refined Petroleum Products or Liquified Petroleum Gasses, and Non-Overflowing Wastewater Treatment Systems for a Hydrodemolition/Hydroblasting Project.

For discharges not covered by general permits, individual permits must be developed as follows:

A. Development of Effluent Discharge Limitations

Development of effluent limitations involves a hierarchical process. The first step in the process involves the application of a minimum level of treatment for suspected pollutants or categories of pollutants. These limitations are established for certain categorical industries through effluent guidelines promulgated by EPA in 40 CFR Part 400, Subchapter N. The minimum level of treatment for municipal facilities is referred to as secondary treatment and is promulgated by EPA in 40 CFR, Part 133.

The second step in the process involves comparison of the technology-based limit from the first step to water quality based effluent limitations (WQBELs), or limitations established through a total maximum daily load (TMDL). The WQBELs are derived from application of the Kansas Surface Water Quality Standards (KWQS) and standards promulgated by EPA for the State of Kansas. The more stringent of the technology-based limitation, the WQBEL, or the TMDL limitation is used in the permit.

In those cases where there are no technology-based standards, or applicable water quality criteria, BPJ may be used in establishing permit limitations.

Kansas Statutes and Regulations essentially adopt the 40 CFR Part 125 permitting requirements. In general, the Federal regulations require that technology-based treatment requirements under section 301(b) of the Act represent the minimum level of control that must be imposed in a permit issued under section 402 of the Act.

1. Effluent Guidelines - Categorical Industrial Facilities

K.A.R. 28-16-57a adopts by reference 40 CFR Parts 405-436, 439, 440, 443, 446, 447, 454, 455, 457-461, 463, 465, and 469 Effluent Guidelines as in effect on July 1, 1985. This regulation prescribes effluent limitations guidelines for existing

sources, standards of performance for new sources and pretreatment standards for new and existing sources pursuant to the Clean Water Act. The effluent guidelines include the following point source categories:

Asbestos manufacturing
Battery manufacturing
Builders' paper and board mills
Canned/preserved fruits/vegetables processing
Canned and preserved seafood processing
Carbon black manufacturing
Cement manufacturing
Coal mining
Coil coating
Dairy products processing
Electroplating
Electrical and electronic components
Explosives manufacturing
Feedlots
Ferroalloy manufacturing
Fertilizer manufacturing
Glass manufacturing
Grain mills
Gum and wood chemicals manufacturing
Hospital
Ink formulating
Inorganic chemical manufacturing
Iron and steel manufacturing
Leather tanning and finishing
Metal finishing
Metal molding and casting
Mineral mining and processing
Nonferrous metals manufacturing
Oil and gas extraction
Ore mining and dressing
Organic chemicals manufacturing
Plastics, and synthetics
Paint formulating
Paving and roofing materials
Pesticide chemicals
Petroleum refining
Pharmaceutical manufacturing
Phosphate manufacturing
Photographic
Plastics molding and forming
Pulp, paper, and paperboard
Rubber manufacturing
Soap and detergent manufacturing
Steam electric power generating
Sugar processing
Textile mills
Timber products processing

Most effluent guidelines are based on production rates. To calculate permit limits,

effluent guideline values are multiplied by the facility's production rate. Consideration has to be given as to whether production rates will remain constant over the life of the permit. If not, tiered permit limits based on projected production levels may have to be incorporated into the permit.

2. Secondary Treatment Requirements - Municipal/Commercial Facilities

a. Mechanical Plants

i. Secondary treatment will be considered as a monthly average not to exceed 30 mg/l BOD_5 and 30 mg/l TSS, and a weekly average not to exceed 45 mg/l BOD_5 and 45 mg/l TSS. Secondary treatment also requires a pH value of 6.0 to 9.0. A $CBOD_5$ of 5 mg/l less than the BOD_5 limit is considered to be equivalent to a BOD_5.

ii. For trickling filters, secondary treatment will be considered as a monthly average not to exceed 45 mg/l BOD_5 and 45 mg/l TSS, and a weekly average not to exceed 65 mg/l BOD_5 and 65 mg/l TSS. Secondary treatment also requires a pH value 6.0 to 9.0. A $CBOD_5$ of 5 mg/l less than the BOD_5 limit is considered to be equivalent to a BOD_5.

b. Lagoon Systems

Secondary treatment will be considered as a monthly average of 30 mg/l BOD_5 (or 25 mg/l $CBOD_5$) and 80 mg/l TSS where treatment is solely provided by lagoons. *(See Appendix A)*.

If a lagoon system is designed to the KDHE standard design criteria - three cells and 120-day detention or two cells and 150-day detention - the lagoon system permit will contain a requirement for annual monitoring of ammonia

and fecal coliform bacteria. A study conducted by KDHE indicates that lagoon systems meeting the KDHE design criteria consistently produce effluent that meets or exceeds the criteria for ammonia and primary contact recreation (200 fecal coliform colonies/100ml) at the discharge pipe prior to mixing. Additionally, data provided by EPA Region VII indicates that 120-day detention lagoons will remove fecal coliform bacteria to less than one colony/100ml, or 200 times less than the primary contact recreation criteria. Therefore, monitoring will provide trend data indicating the point at which a lagoon system is beginning to fail.

Monitoring for ammonia and fecal coliform bacteria is also consistent with EPA Region VII permits issued on tribal lands in Kansas. Other EPA Regions do not require monitoring for either fecal coliform or ammonia.

If a lagoon system does not meet with KDHE's minimum standards of design, permit limits will be developed for ammonia and fecal coliform bacteria using the factors described in this section.

BOD_5 limits of 30 mg/l will also be established for lagoon systems meeting the KDHE design criteria. A study conducted by KDHE indicated that lagoon systems meeting the KDHE design criteria consistently discharge soluble BOD_5 at less than 10 mg/l. Lagoons, by nature, generate algae. Due to algae in the lagoon system effluent, EPA has approved total suspended solids limits of 80 mg/l on a monthly average in Kansas. In other states, the monthly average limit is even higher. Algae also exert an oxygen demand in the BOD test due to the fact BOD incubators are devoid of light. Without light, algae do not produce oxygen via photosynthesis. In the open environment of a surface water, algae would be exposed to sunlight and would produce oxygen to at least partially offset oxygen demand. Streeter and Phelps acknowledged this phenomenon in their classic model used to

predict oxygen demand. They were unable, however, to quantify the oxygen production. Furthermore, since algae remain living organisms in the effluent that produce oxygen as well as demand oxygen, the exertion of maximum BOD (thus dissolved oxygen sag) typically will not occur at the same location in a receiving water as it will for soluble BOD. Finally, there is a lack of any monitoring evidence that discharge from properly designed lagoon systems have caused in-stream biological impacts due to dissolved oxygen depletion.

Therefore, based on facts that algae 1) algae add oxygen to a receiving water during daylight hours; 2) maximum oxygen demand occurs at a location in the receiving water that is different from maximum oxygen demand exerted by soluble oxygen; and 3) there is a lack of monitoring data tying discharge from properly designed lagoons to in-stream biological impacts, technology-based 30 mg/l BOD_5 limit will be used for lagoon systems that meet the KDHE design criteria.

3. Water Quality Based Effluent Limits (WQBELs) - Municipal and Industrial Facilities

Any discharge to waters of the state must meet limits that assure the Kansas Surface Water Quality Standards (KWQS) and EPA-promulgated standards will be met *(See Appendix B)*. The only exception is in the case of a variance being granted based on widespread socioeconomic impacts. The KWQS consist of definitions, classification of streams, use designations, narrative criteria, and numerical criteria. Desktop modeling is utilized to develop permit effluent limitations that assure compliance with the KWQS. Inputs into the modeling process include the following items:

a. Upstream Water Quantity

i. Seven-Day Ten Year Stream Flow (7Q10)

Alternate Low Flow

Applicable Regulations: 28-16-28b(ww)
28-16-28c(b)(3)
28-16-28c(b)(7)-(11)
28-16-28c(c)(1)

The default low flow utilized by KDHE to determine WQBELs is the hydrologically-based 7Q10 flow. Whenever possible, KDHE will assign a 7Q10 flow to a receiving stream on the basis of United States Geological Survey (USGS) stream flow gaging data. KDHE may, at its discretion, modify the assigned 7Q10 value to reflect gains or losses in flow occurring between the discharge of interest and the reference (nearest upstream or downstream) USGS gaging station. In the determination, KDHE may exclude stream flow data measured prior to construction of upstream flow control structures and exclude stream flow data measured prior to guaranteed stream flow rates based on water assurance district agreements. KDHE may also exclude data not representative of current flow conditions (i.e., increased interstate flows). For streams lacking an adequate USGS database, other sources of hydrological data (e.g., runoff yield maps or KDHE stream flow gaging data) may be used by KDHE in the estimation of 7Q10 flow. Streams classified as outstanding national resource waters, exceptional state waters, or designated as special aquatic life use waters with flows less than 0.003 cubic meters per second (cms) and lacking an appropriate hydrological database will be assigned a default value for 7Q10 flow of 0.003 cms; streams designated as expected aquatic life use waters or restricted aquatic life use waters with flows less than 0.03 cms and lacking an appropriate hydrological database will be assigned a default value for 7Q10 flow of 0.03 cms.

ii. Alternate Low Flow

Applicable Regulations: 28-16-28b(d)

28-16-28c(b)(9)

An alternate low flow must have a sound basis for its use. Examples include water assurance district guaranteed minimum low flows and flows based on allowable exposure frequencies and durations for species of concern. For instance, the most current available study on ammonia toxicity (EPA 1998) recommends utilizing a 30-day exposure period when determining ammonia limitations. Therefore, a thirty-day, ten year (30Q10) low flow will be used in determining ammonia limitations for the chronic ammonia criterion.

b. Pollutant Parameters

Effluent limitations are evaluated for those parameters the permittee identifies, or the permit writer believes has a reasonable potential to be found in the discharge. Background stream concentrations are derived from instream data collected through the KDHE stream water monitoring network. Otherwise, concentrations are extrapolated from the network data.

c. Reasonable Potential

Applicable regulation: K.A.R. 28-16-28e

Reasonable potential means the effluent from the facility normally does not exceed the WQBELs placed in the permit but because of variations in the effluent due to influent and treatment variability, it has a potential to do so.

KDHE uses the attached Reasonable Potential procedure developed by EPA Region VI with the modifications described in the letter accompanying the procedure. *(See Appendix C)*

d. Mixing Zones

i. Streams

Applicable Regulations: 28-16-28c(b)

In cases where the ratio of the receiving stream low flow to effluent discharge design flow listed on the permit is less than 3:1, the default mixing zone consists of 100% of the stream flow and a length of 300 meters. Chronic aquatic life criteria and all other criteria must be met at this point with the exception of drinking water criteria which must be met at the point of diversion. Where the ratio of the receiving stream low flow to effluent discharge design flow listed on the permit is greater than or equal to 3:1, the default mixing zone is 300 meters in length and:

- 25% of the stream flow for waters classified exceptional state waters, or designated special aquatic life use waters, and all recreational use waters. A 25% mixing zone will be applied to recreational criteria (fecal coliform bacteria) regardless of the aquatic life or other use designation.

- 50% of the stream flow for waters designated as expected aquatic life use waters.

- 100% if the stream flow for waters designated as restricted aquatic life use waters.

- In cases where surface waters with existing discharges are classified as Outstanding National Resource Waters, mixing zones will be allowed for those existing discharges for the term of the existing permit. No new discharges will be allowed after the reclassification. At the time of permit renewal or modification for an existing

discharge permit, the mixing zone allocation for the existing discharge will be evaluated and the percentage of cross-sectional area or flow may be reduced or eliminated based on the new ONRW classification. The mixing zone evaluation will use available stream data, historical plant data, receiving stream and plant flows, and aquatic community health to determine whether a mixing zone and its size will be allowed in the renewed or modified permit.

In all cases, the implementation of the above mixing zone requirements, the mixing zone can be modified based on the proximity of downstream public drinking water intakes, swimming areas, boat ramp areas and mouths of classified stream segments as well as the overlapping of mixing zones, or when using best professional judgement significant environmental impact or public health concerns are noted from the unmixed effluent. In these situations, the mixing zone will be reduced.

Mixing zones may also be modified based on the use of alternate low flows, or studies which support the use of a modified mixing zone which may incorporate methods outlined in EPA's Technical Support Document for Water Quality-based Toxics Control.

A zone of initial dilution (ZID) contained within the boundaries of the mixing zone may be granted for some discharges. The ZID can comprise no more than 10% of the volume of the mixing zone immediately below the discharge point. The zone of initial dilution is the area within the mixing where both acute and chronic aquatic life criteria may be legally exceeded. Where mixing zones are not allowed, a zone of initial dilution is prohibited. The Department also reserves the right to prohibit a zone of initial dilution, based on site-specific conditions, where a mixing zone has been granted.

ii. Lakes

Applicable Regulation: 28-16-28c(b)(13)

Mixing zones within lakes classified as outstanding national resource waters, in K.A.R. 28-16-28b(mm), exceptional state waters, in K.A.R. 28-16-28b(w) or as special aquatic life use waters in K.A.R. 28-16-28d will be prohibited by KDHE. Although mixing zones may be permitted in other classified lakes (expected or restricted aquatic life use waters), KDHE will require permit applicants to comply with the physical limitations for mixing zones set forth in K.A.R. 28-16-28c(b)(13). Evidence obtained through field studies, dispersion modeling analyses or other appropriate methods will be considered by KDHE during the permitting procedure.

Whenever possible, estimates of lake volume at conservation pool will be based on data provided by the official lake planning or administrative authority (e.g., U.S. Army Corps of Engineers, Bureau of Reclamation, Natural Resources Conservation Service, Kansas Department of Wildlife and Parks). When lake volumetric data is unavailable or of questionable accuracy, the permit applicant will be encouraged to conduct appropriate morphometric and hydrological surveys to provide KDHE with a scientifically defensible estimate of conservation pool volume. A mixing zone within a classified lake will not exceed more than one percent of the lake conservation pool volume.

iii. Wetlands

Applicable Regulation: 28-16-28c(b)(14)

Mixing zones within classified lacustrine or palustrine wetlands will be prohibited by KDHE owing to the relatively slow circulation and limited mixing of these waters. At a minimum, effluent discharged into a classified wetland must meet all applicable aquatic life support, water supply, food procurement, and recreational criteria prior to contact with the receiving

water unless the wetlands are utilized as part of a wastewater treatment process, or where site specific criteria apply.

e. Permit Limit Derivation

Applicable Regulations: K.A.R. 28-16-28c
K.A.R. 28-16-28d
K.A.R. 28-16-28e

i. Disinfection

In the 1994 Water Quality Standards, KDHE designated all classified streams for non-contact recreation *(now secondary contact recreation)* and in the 1994 Kansas Water Quality Register some streams and stream segments for contact recreation *(now primary contact recreation)*. Some of these designations are not based upon current Use Attainability Assessments and are subject to best professional judgement based on very limited data.

In areas of downstream high population density (urban streams), KDHE will use best professional judgement and the authority of Kansas Statute 65-171(d) and K.A.R. 28-16-28c(d)(2) will routinely require continuous (year-round) disinfection for public health protection.

In surface waters where downstream primary contact recreation has been determined as a probable use and in urban streams, wastewater effluent limitations of 200 organisms per 100 milliliter sample per month geometric average will be required at the edge of the mixing zone of all dischargers having wastewater originating from human or animal waste. Also, for primary contact recreation use, no samples can exceed 900 colonies per 100 milliliters.

The Department will consider receiving stream dilution and fecal die-off when considering requiring disinfection of a discharge into a receiving stream segment above a designated primary contact recreation site. Also, the Department will consider receiving stream dilution and upstream fecal coliform count when developing effluent limitations for fecal coliform discharges into streams designated for secondary contact recreation.

Where chlorine or any other halogen is used as the disinfectant, dechlorination (dehalogenation) will be required. In some cases, the water quality-based effluent limitations for chlorine are not quantifiable using EPA approved analytical methods. KDHE has determined the current acceptable quantification level for total residual chlorine to be 100μg/l. The permittee will conduct the analyses in accordance with the method specified and will utilize a standard equivalent to the minimum detection level. For reporting purposes, actual analytical values will be reported. Measured values above the quantification limit or the permit limit, whichever is higher, will be considered violations of the permit. Values below the quantification limit will be considered to be in compliance with the permit limitation and as zero (0) when utilized in any subsequent calculations. The quantification threshold does not authorize the discharge of chlorine in excess of the water quality-based effluent limits stated in the permit.

ii. Metals

Applicable regulation: K.A.R. 28-16-28e

Tables 1a and 1b of the referenced regulation provide instream water quality-based limits for certain metals based upon the surface water designated use categories. KDHE routinely conducts compliance monitoring studies on the effluent from discharging wastewater treatment facilities at a frequency based upon the size and nature of the wastewater treatment facility, the type of industrial contributors to the facility and the

characteristics and designated uses of the receiving stream. Major discharging wastewater treatment facilities (≥1 MGD) and minor discharging wastewater treatment facilities (<1 MGD) with pretreatment contributors are generally monitored once a year. Part of this compliance monitoring involves determining the concentrations of the pollutant metals listed in Table 1a in the wastewater treatment plant effluents.

Upon request, or during the permit renewal period, the KDHE will calculate an allowable concentration in the wastewater treatment facility effluent for each of the metals listed in Appendix B. Permit limits will be expressed as Total Recoverable Metals.

Parameters are:

- Metal Limits in the receiving stream: Use the data in K.A.R. 28-16-28e, Table 1a or the equations in Table 1b as appropriate.

- Hardness (as CaCO3): Use the 90th percentile stream values as measured. If insufficient, use data from similar streams and near the subject location.

- Stream Flow: Use low flow.

- Effluent Flow: Use design flow from the NPDES permit, or flow as requested on the permit application.

- Receiving Stream Background Metals Data: Use the 50th percentile of measured stream values. Use zero for all values reported below the minimum detection limit.

- Effluent Metals Data: Use measured data. Use zero on all values

reported below the minimum detection limit.

The effluent metals limits as calculated are compared with metal concentrations determined during compliance monitoring using the Reasonable Potential procedure discussed in Section II.A.3.a. of this document.

iii. Five-day Biochemical Oxygen Demand (BOD_5)
Applicable regulation: K.A.R. 28-16-28e(c)(2)(A)

Five-day Biochemical Oxygen Demand (BOD_5) is calculated utilizing a modified Streeter-Phelps equation. The calculations are performed in an iterative manner until the effluent BOD_5 of a discharge produces an in-stream reduction of dissolved oxygen concentration of not less than 5.0 mg/l.

iv Ammonia
Applicable regulation: K.A.R. 28-16-28e(d) table 1c

If a finding is made and approved by the Department for a site or ecoregion that identifies a time of year when no sensitive life stages of fish species are ordinarily present in numbers affecting the sustainability of populations, the criterion applicable to that time of year may be set up to 3-fold higher than the criterion applicable to the remainder of the year. Where future research reveals that other vertebrate or invertebrate species are sensitive to chronic concentrations of ammonia, the Department will consider those newly identified species or life stages in setting alternate site or regional criteria. Baseline and subsequent biological monitoring in accordance with currently available EPA guidance should be

conducted to assure that the integrity of the aquatic community being protected is maintained when these higher cold-season concentrations are allowed.

v. Other parameters

Limitations for other pollutant parameters are developed utilizing steady state dilution modeling. For modeling purposes, actual background concentrations for the parameters in question are utilized where available.

f. Whole Effluent Toxicity

i. Species

Acute and chronic toxicity testing of discharges will use invertebrate and vertebrate species. Acute invertebrate toxicity testing will be conducted on any of the following daphnid species:

Daphnia Pulex
Daphnia magna
Ceriodaphnia dubia

Chronic invertebrate toxicity testing will be conducted on *Ceriodaphnia dubia* unless an alternate species is approved by KDHE.

Vertebrate toxicity testing will be conducted on the fathead minnow *Pimephales promelas*.

ii. Acute toxicity

Procedures for toxicity testing will be in conformance with the EPA

publication titled "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms", fourth edition, August, 1993. Monitoring and effluent limitations for acute toxicity, as defined under 28-16-28b(o), will be included in permits using the following criteria:

- All KDHE-defined major discharging wastewater treatment facilities, except those facilities classified as majors because of non-contact cooling water, will be required to conduct, as a minimum, an annual acute toxicity monitoring test on a representative sample of the wastewater effluent. KDHE will utilize BPJ to determine if more frequent toxicity testing is appropriate.

- KDHE will utilize best professional judgment to determine when other wastewater treatment facilities will be required to conduct acute toxicity monitoring. In this determination, KDHE will consider the size and type of industrial contributions to the wastewater system, previous toxicity testing results, the potential causes for the toxicity, the relative size and use designation of the receiving surface water body, and information from stream studies.

- Whenever results from two consecutive or any two of four consecutive acute toxicity tests indicate the effluent is more toxic than levels established in the permit, and the cause for the toxicity is not apparent, the permittee will be required to conduct at least quarterly acute toxicity tests for one year. Results from KDHE labs, EPA labs, and KDHE certified labs are acceptable. If the results of additional toxicity tests indicate no acute toxicity at the edge of the zone of initial dilution, the testing frequency will be returned to previous levels. If acute toxicity continues, at least quarterly testing will continue and the permittee will be required to conduct a

Toxicity Inventory Evaluation (TIE) in accordance with EPA guidance to attempt to determine the source and type of toxicity being discharged. KDHE may require a toxicity inventory evaluation at any time during the additional testing. The toxicity will need to be eliminated through a Toxicity Reduction Evaluation (TRE).

iii. Chronic Toxicity

Procedures for chronic toxicity testing will be in conformance with the EPA publication titled "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", second edition, March, 1989.

Monitoring and permit limit requirements for chronic toxicity, as defined under K.A.R. 28-16-28b(p), may be included in permits using the following criteria:

- When the allowable median lethal concentration calculated at the edge of the zone of initial dilution exceeds 100%, a chronic toxicity test may be utilized. This situation can occur where the stream mixing zone dilution is small in comparison to the facility discharge volume.

- When significant environmental damage is determined through in-stream bioassessment procedures in a classified surface water flowing at or above low flow conditions as defined in K.A.R. 28-16-28c(c)(1), and the damages are believed to be caused by a wastewater discharge, even though no acute toxicity is detected in the wastewater

effluent, a chronic toxicity test may be utilized.

- Whenever results from two consecutive or any two of four consecutive chronic toxicity tests indicate the effluent is more toxic than levels established in the permit, and the cause for the toxicity is not apparent, the permittee will be required to conduct at least quarterly chronic toxicity tests for one year. Results from KDHE labs, EPA labs, and KDHE certified labs are acceptable. If the results of additional toxicity tests indicate no chronic toxicity at the edge of the mixing zone, the testing frequency will be returned to previous levels. If chronic toxicity continues, at least quarterly testing will continue and the permittee will be required to conduct a Toxicity Inventory Evaluation (TIE) in accordance with EPA guidance to attempt to determine the source and type of toxicity being discharged. KDHE may require a toxicity inventory evaluation at any time during the additional testing. The toxicity will need to be eliminated through a Toxicity Reduction Evaluation (TRE).

4. Best Professional Judgement

For pollutants where there are no effluent guidelines, or where there are no water quality criteria, best professional judgment (BPJ) may be used in developing permit limitations.

B. Administrative Permit Issuance

1. Certification Procedure

Applicable regulation: K.A.R. 28-16-28f(c)

KDHE will issue a water quality certification for any actions taken by the department as described in K.A.R. 28-16-28f(c)(1) through (4).

For major wastewater treatment facilities required to have a federal license or permit pursuant to the federal clean water act, the department will certify the actions via the Fact Sheet and the permit. The Fact Sheet will contain the certification statement and summarize the supporting documents used to develop the permit limits and conditions.

For minor wastewater treatment facilities required to have a federal license or permit pursuant to the federal clean water act, the department will certify the actions via the Statement of Basis form and the permit. The Statement of Basis form will contain the certification statement and summarize the supporting documents used to develop the permit limits and conditions.

For other minor treatment facilities required to have a State permit but not a federal license or permit, KDHE will certify the actions via a KDHE Review Checklist and a Kansas Water Pollution Control permit.

For other actions taken by the department as described in K.A.R. 28-16-28f(c)(1) through (4), KDHE will issue a water quality certification within the documents approving the action.

2. Parameter Monitoring, Limits, and Frequency

Applicable regulation: K.A.R. 28-16-28e

a. Parameter Monitoring

The Kansas Water Quality Standards (KWQS) provide a list of parameters

with in-stream water quality limitations (criteria). In addition, the general narrative criteria state that surface waters will be free from the harmful effects of substances that originate from artificial sources of pollution and produce any public health hazard, nuisance condition, or impairment of designated use.

Many of the potential pollutants listed in the tables of the KWQS are used almost exclusively in specialized industries and are generally attributed to those industries. Other potential pollutants are easily volatilized, treated, chemically bound, or eliminated from the water. Still others, such as toxaphene and DDT, are banned from production and use and only "leftover" quantities appear infrequently in the influents to wastewater treatment facilities. Therefore, it is neither cost effective nor necessary to measure for every regulated parameter in the KWQS tables. KDHE places in each permit, requirements to monitor certain parameters based upon the likelihood that the parameters are present in concentrations which exceed the KWQS criteria. KDHE may require pollutant scans and/or whole effluent toxicity testing to determine the presence of a class of pollutants or the overall effect of the effluent on aquatic life. KDHE will evaluate the type of service area and treatment plant, plant design flows and actual flows, the ratio of receiving a stream flow rate relative to the effluent flow rate, stream designated uses, pollutant characteristics, the industrial contribution, and the pre-treatment practices of the contributing industry, in determining if whole effluent toxicity testing or pollutant scans requirements are needed in the permit.

b. Parameter Limits

Parameter limits are generally set by technology-based criteria, categorical standards criteria, or Water Quality Standards criteria. The limits are based upon the receiving stream's designated uses, plant design flow, water

quality assessment effluent flow, receiving stream flow, historical plant and receiving stream data, and employment of modeling formulas with these data. However, in an increasing number of cases, the permit limits, as calculated, are below the minimum detection limit (MDL) of the approved methods outlined in 40 CFR Part 136. In these cases, KDHE will place the limit, as calculated, in the permit with a notation similar to:

"* This limit is below the minimum quantification level of _____ (units) for this parameter using any suitable approved test method in 40 CFR Part 136. This requirement shall be satisfied by a measurement of _____ (units) or less when using (test method or instrument approved by 40 CFR Part 136). The quantification threshold does not authorize the discharge of (parameter) in excess of the water quality-based effluent limit stated in the permit."

c. Parameter Testing Frequency

The frequency for which a parameter is tested is dependent upon many factors such as the flow rate and type of treatment facility, the receiving stream designated uses, the receiving stream flow rate relative to the effluent flow rate, the toxicity and likely presence of the parameter, potential for episodic flows with higher than normal concentrations of the parameter, operating history of the facility, amount and quality of available data, amount and type of industrial contributors to the collection system. A suggested testing frequency follows*:

Facility Flow Rate	**General Testing Frequency***
Quarries & Similar	Monthly to Semi-Annual
Small 120 Day Lagoons	Quarterly

Mechanical Plants and Large Lagoons

>0 to 1.0 MGD	Monthly
1.0 to 2.5 MGD	Twice Monthly
2.5 to 5.0 MGD	Four Times Monthly
5.0 to 10.0 MGD	Twice Weekly
10.0 to 20.0 MGD	Three Times Weekly
20.0 to 40.0 MGD	Every Other Day
40.0 MGD and above	Daily

* Suggested testing frequency is for routine parameters. The permit writer may use BPJ to appropriately increase or decrease the testing frequency as necessary to satisfy the regulatory requirements for each permit.

Testing frequency may also be increased or decreased based on historical performance of the treatment facilities.

3. **Background Concentrations**

Applicable regulation: K.A.R. 28-16-28e (b)(9)
K.A.R. 28-16-28e (c)(3)(B)

In surface waters where naturally occurring concentrations of elemental substances such as chlorides or sulfates exceed the numeric criteria given in Tables 1a, 1b, and 1c in the KWQS, the newly established numeric criteria will be the background concentration in the receiving water. Background concentrations applied as criteria will be determined only for those substances incorporated into surface waters that are released from geologic deposits and formations as a result of erosional processes or groundwater intrusions.

The background concentration of a receiving water may be established using data from STORET or data from other data bases with adequate and documented quality assurance procedures acceptable to KDHE. The background concentration will be determined using existing instream chemical parameter measurements and stream flow measurements. Background concentration will be determined using the mean concentration of instream measurements. Only those measurements gathered when stream flow is at or below 50^{th} percentile of all stream flow values will be used to determine background concentrations. A minimum of five data points will be required to make a background concentration determination. If sufficient data is not available, then the background concentration will be established through monitoring. Samples will be collected in upstream areas representative of the receiving water, including various habitat types, and unaffected by the discharge being permitted, or other identifiable anthropogenic influences. Samples from streams will be collected as close as possible to low flow conditions. Samples from lakes will be collected outside of the regulatory mixing zone. The mean of at least five concentration observations is required to establish the background concentration. Hardness and pH data should also be gathered if the criterion is hardness or pH dependent.

4. Compliance Schedules

Applicable regulation: K.A.R. 28-16-28f(d)

Compliance schedules are placed in permits when the permittee is unable to comply with water quality requirements or special conditions. Interim and final limits are placed in the permit with monitoring normally required for the parameters for which the compliance schedule was developed.

5. Narrative Criteria

Applicable regulation: K.A.R. 28-16-28e(b)

Narrative criteria are implemented through the application of permit limits for individual pollutants and Whole Effluent Toxicity testing for combinations or unidentified toxic substances. Narrative criteria are also implemented through standard language placed in NPDES permits.

6. Site-Specific Criteria

Applicable regulation: K.A.R. 28-16-28f(f)

A site-specific criteria determination can change the water quality aquatic life criteria for a parameter(s) in a given stream segment. A change in criteria based on a site-specific determination will not be granted to allow technology-based limits to be exceeded. A schedule of compliance in the permit will be required where technology-based limits are exceeded.
The discharger requesting a site-specific determination from the criteria set via K.A.R. 28-16-28e must specifically state, in writing to KDHE, the parameters for which a site-specific determination is being sought. The request must include the scope, content and time frame for a study to gather data in support of the site-specific determination being requested.

The site-specific determination study must be conducted in accordance with one of the three methods outlined in USEPA's Interim Guidance on Determination and Use of Water Effect Ratios for Metals, EPA-823-B-94-001, or other acceptable methods (background concentration determination or winter time ammonia criteria). The study may also provide supporting data establishing the chemical, physical and biological condition of the receiving water, including the number, diversity, and health of the biological resources in the stream. Studies to make a site-specific determination may also use guidelines provided in EPA's Technical Support Document for Water Quality-based Toxics Control.

KDHE will require the study be conducted by persons skilled in developing the information required in the site-specific determination report. Such skills will include appropriate techniques for conducting the approved EPA methods and relevant biological studies. KDHE approval of the scope, content, and time frame of the study is required.

KDHE will conduct a forum for the public to participate in the establishment of site-specific aquatic life criteria. KDHE will invite interested parties, regional experts, and the general public to assist in the construction of the scope and content of any studies used for support or development of site-specific criteria. The public will also be invited to comment on proposed criteria through the public notice process and if deemed necessary, through a public hearing.

Normally, KDHE will allow 12 months to gather the necessary data and three additional months to assimilate and present the report. This time frame may be extended or reduced based upon the complexity of the study, weather induced delays and other contingencies outside the control of the discharger. During this time, monitoring requirements will be placed in the permit for the parameters which will be affected by the site-specific determination. The requirements in the original permit issued prior to allowing the site-specific criteria study will remain in effect until the permit is renewed or until a final decision is made on the site-specific criteria request.

The decision and appropriate permit modifications will be public noticed and subject to review and appeal. If the request to change the site-specific criteria is not granted and the permittee is unable to meet the required limitations, the permit will be modified with a schedule of compliance.

7. Variances

Applicable regulations: K.A.R. 28-16-28f(e)

A variance is a mechanism that allows a delay in compliance for the stream segment and specific water quality parameters for which the variance is granted. A variance does not change the receiving stream designations or the level of protection to be afforded the stream. A variance should only be requested when compliance with a water quality criteria will have substantial and widespread socioeconomic impact. A variance cannot be granted which would result in effluent limitations above technology-based limits. A variance is granted, at a maximum, for the time period of the NPDES permit. A variance allows effluent limitations for certain pollutants, and parameters above the water quality-based limitations necessary to satisfy the criteria set via K.A.R. 28-16-28e.

The person requesting a variance from the criteria set via K.A.R. 28-16-28e(c) must specifically state, in writing to KDHE, the parameter(s) for which a variance is being sought. The request must also include the scope, content, and time frame for a study justifying the variance. KDHE approval of the scope, content and time frame of the study is required. The study must be conducted by a person, or persons, skilled in developing the types of information required in a variance study. Such skills will include appropriate financial knowledge, engineering cost estimating, and user charge development.

The variance procedure shall follow the EPA Guidance Document titled "Interim Economic Guidance for Water Quality Standards, March 1995" (EPA-823-b-95-002).

The decision and appropriate permit modifications shall be public noticed and both the decision and the modified permit shall be subject to review and

appeal. If the variance is not granted, the permit will be modified with a schedule of compliance.

8. Public Notice

Public notice and hearings on actions concerning these regulations shall be in accordance with K.A.R. 28-16-61. K.A.R. 28-16-61, among other things, adopts 40 CFR Part 124.10(c)(1)(i),(ii),(iii), and (iv) which requires notification of pertinent government agencies in regards to proposals for draft NPDES permits. KDHE sends copies of all public notice documents to all agencies identified in the Water Projects Environmental Coordination Act (K.S.A. 82a-326).

Public notice of state-wide concerns is published in the Kansas Register and daily newspapers across the state. Regional and local issues are public noticed in the Kansas Register and regional and/or local daily and/or weekly newspapers based upon circulation of the newspaper and/or status as the official newspaper for the entity.

9. Permitting Issuance

The permitting process used by the Bureau of Water is shown in the flow schematic in Appendix D. The two primary categories of permits are the National Pollutant Discharge Elimination System (NPDES) permits which are joint federal/state permits for overflowing (discharging) facilities and Kansas Water Pollution Control permits which are Kansas-only permits for non-overflowing (total retention) facilities. Both types of permits are given state permit identification numbers. Only the joint federal/state permits have federal identification numbers. All wastewater treatment facility

permit numbers are assigned by KDHE.

The only significant difference in the way the two types of permits are processed is the federal/state permits require a surface water quality assessment while the non-overflowing state permits do not require such an assessment since no treated wastewater is discharged to surface waters of the state or the United States.

For federal/state facilities required to have a federal license or permit pursuant to the federal clean water act, the initiating KDHE section will request a water quality assessment from the appropriate KDHE section via the Water Quality Assessment form. Comments and data provided on, or with the WQA form, the available stream data, current regulations, and other applicable standards will be reviewed to determine appropriate parameters and limitations for the effluent from the wastewater treatment facility. The initiating section will review the calculated parameters and limitations and determine, based upon characteristics of the effluent, the parameters which are likely to be present and, if a Reasonable Potential to exceed the proposed limits exists. If the parameters have technology based or categorical limits or if Reasonable Potential exists, parameter limits will be placed in the permit. If Reasonable Potential does not exist, limits on that parameter will not be placed in the permit. If insufficient data is available to conduct a reliable Reasonable Potential calculation, monitoring for the parameter may be required. Such circumstances are discussed in the Reasonable Potential section of these Implementation Procedures.

After permits have gone through the approval process, they are dated (effective date and expiration date) and signed by the Secretary of the Kansas Department of Health and Environment.

Permits can be effective for up to five years. Permits are currently being

assigned to expire in certain years, according to the drainage basin to which they discharge or, for a non-overflowing facility, where they are located. During this transition some permits may expire in two to four years instead of the normal five years. KDHE will conduct a basin-wide water quality study prior to the year during which the permits in that basin expire to determine if any of the monitored pollutants exceed the water quality standards criteria. If the water quality standards are exceeded and are caused by artificial sources, the sources will be identified and a wasteload allocation to each source (point and/or non-point) shall be assigned to reduce the pollutants, to meet the water quality standards.

The Department may also require a shorter permit effective time where pollutants of concern are expected but data is not adequate to determine Reasonable Potential and/or there is a need to upgrade the treatment process.

In general, the effective and expiration dates shall be at or near the end or beginning of a month so as to avoid confusion when changes occur between the old and new permit. New permits on quarterly monitoring schedules shall be routinely assigned quarterly reporting months of April, July, October and January.

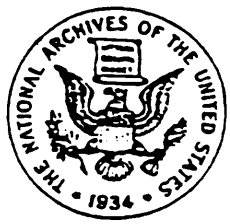
A flow schematic of the permitting process is included in Appendix D.

Appendix A

Lagoon Solids Limits

, NOVEMBER 15, 1976

PART IV



federal register

ENVIRONMENTAL PROTECTION AGENCY

WASTEWATER TREATMENT PONDS

Suspended Solids Limitations

[6560-01-M]

ENVIRONMENTAL PROTECTION AGENCY

[FRL-10064]

SECONDARY TREATMENT INFORMATION REGULATION

Suspended Solids Limitations for Wastewater Treatment Ponds

On October 7, 1977, the Environmental Protection Agency (EPA) published in the FEDERAL REGISTER (42 FR 54666) a final amendment to the secondary treatment information regulation applicable to the suspended solids limitations for certain municipal wastewater treatment ponds. The secondary treatment information regulation, 40 CFR 133, contains effluent limitations in terms of biochemical oxygen demand, suspended solids and pH which must be achieved by municipal wastewater treatment plants.

The amendment added a new paragraph (c) to § 133.103 of 40 CFR 133. This allows a case-by-case adjustment in suspended solids limitations for publicly owned waste stabilization ponds, if: The pond has a design capacity of 2 million gallons per day or less; ponds are the sole process for secondary treatment; and, the pond meets the biochemical oxygen demand limitations as prescribed by 40 CFR 133.102(a). Ponds that are not eligible for this adjustment include: Basins or ponds used as a final polishing step for other secondary treatment systems, and ponds which include complete-mix aeration and sludge recycle or return since these systems are in essence a variation of the activated sludge process. Aerated ponds without sludge recycle, however, are eligible for adjustments provided the other specific requirements are met.

The amended suspended solids limitations were determined by statistical analysis of available data. The acceptable limit was defined as that concentration achieved 90 percent of the time by waste stabilization ponds that are achieving the biochemical oxygen demand limitations of 40 CFR 133.102(a). Each State was considered separately as well as appropriate contiguous geographic areas within a State or group of States. The analysis was done by the States or the applicable EPA regional office in cooperation with the States.

A considerable amount of latitude was allowed in developing these values to account for varying conditions affecting pond use and performance across the country. Categorizations within States based on factors such as geographic location, seasonal variation and the type of pond were permitted. In some instances, the values presented below reflect these factors.

In accordance with the amended regulation, a single value corresponding to the concentration achievable 90 percent of the time may be used to establish the suspended solids limitations for ponds within a State. The concentration achievable 90 percent of the time has been generally accepted as corresponding to a 30 consecutive day average (or an average value over the period of discharge when entire duration of the discharge is less than 30 days). This interpretation is consistent with the analysis which was used as the basis for the other suspended solids and biochemical oxygen demand limitations contained in 40 CFR 133.

For this reason, a single suspended solid concentration has been listed below for ponds (or subcategory of ponds) within a State. In some cases, however, the States and EPA regional offices have agreed upon additional values, such as weekly averages or daily maximums, which will be used for compliance monitoring purposes within those States.

In some cases the data base for the analysis was quite limited and in all cases additional data are being collected. A periodic reevaluation of this expanding data base will be conducted and could result in further changes in the suspended solids limitations listed below. Several EPA regional offices have already indicated their intent to conduct a reevaluation within 2 years or less. Even though publication of these values is not a formal rulemaking procedure, public comments are welcome and will be considered in any revisions. Comments should be submitted to Director, Municipal Construction Division (WH-547), Environmental Protection Agency, Washington, D.C. 20460.

FOR FURTHER INFORMATION CONTACT:

Sherwood Reed or Alan Hais, Municipal Construction Division (WH-547), Office of Water Program Operations, Environmental Protection Agency, Washington, D.C. 20460, 202-426-8976.

Dated October 27, 1978.

THOMAS C. JORLING,
Assistant Administrator for Water and Waste Management.

ENVIRONMENTAL PROTECTION AGENCY

SUSPENDED SOLIDS LIMITATIONS FOR WASTEWATER TREATMENT PONDS **

Location and Suspended Solids Limits [1]
Alabama—90.
Alaska—70.
Arizona—90.
Arkansas—90.
California—95.
Colorado
Aerated ponds—75.
All others—105.
Connecticut—N.C.
Delaware—N.C.
District of Columbia—N.C.
Florida—N.C.
Georgia—90.
Guam—N.C.
Hawaii—N.C.
Idaho—N.C.
Illinois—37.
Indiana—70.
Iowa
Controlled Discharge, 3 Cell and Case-t Case but not Greater Than 80
All others—80.
Kansas—80.
Kentucky—N.C.
Louisiana—90.
Maine—45.
Maryland—90.
Massachusetts—N.C.
Michigan
Controlled seasonal discharge
Summer—70.
Winter—40.
Minnesota—N.C.
Mississippi—90.
Missouri—80.
Montana—100.
Nebraske—80.
North Carolina—90.
North Dakota
North and east of Missouri River—60.
South and west of Missouri River—100.
Nevada—90.
New Hampshire—45.
New Jersey—N.C.
New Mexico—90.
New York—70.
Ohio—65.
Oklahoma—90.
Oregon
East of Cascade Mountains—85.
West of Cascade Mountains—50.
Pennsylvania—N.C.
Puerto Rico—N.C.
Rhode Island—45.
South Carolina—90.
South Dakota—110.
Tennessee—100.
Texas—90.
Utah—N.C.
Vermont—55.
Virgina
East of Blue Ridge Mountains—60.
West of Blue Ridge Mountains—78.
Eastern Slope Counties: Loudoun, Fauqu Rappahannock, Madison, Green, Al marle, Nelson Amherst, Bedford, Fra lin, Patrick and, *Case-by-Case applicat of 60/78 Limits*
Virgin Islands—N.C.
Washington—75.
West Virginia—80.
Wisconsin—60.
Wyoming—100.
Trust Territories and North Marianas—N

NOTES.—N.C.—No change from exist criteria.

** The values set for Iowa and Virginia incorporate a specific case-by-case provisions; however, in accordance with 40 CFR 133.133.103(c), adjustments of the suspended solids limitations for individual ponds in all States are to be authorized on a case-by-case basis.

[FR Doc. 78-32022 Filed 11-14-78; 8:45 a

Appendix B

State/Federal Water Quality Criteria

Table 1a. State Numeric criteria.

PARAMETER	USE CATEGORY: AQUATIC LIFE ACUTE	AQUATIC LIFE CHRONIC	AGRICULTURE LIVESTOCK	AGRICULTURE IRRIGATION	PUBLIC HEALTH FOOD PROCUREMENT	PUBLIC HEALTH DOMESTIC WATER SUPPLY
RADIONUCLIDES (pCi/L)						
gross beta radioactivity	a	a	a	a	a	50
gross alpha particles including radium-226, but not radon or uranium	a	a	a	a	a	15
radium 226 and 228 combined	a	a	a	a	a	5
strontium 90	a	a	a	a	a	8
tritium	a	a	a	a	a	20,000
METALS (µg/L)						
antimony, total	88	30	a	a	4,300	6
arsenic, total	a	50	200	100	20.5	b
arsenic (III)	360	50	a	a	b	b
arsenic (V)	850	48	a	a	a	a
barium	a	a	a	a	a	2,000
beryllium, total	130	5.3	a	100	0.13	4
boron, total	a	a	5,000	750	a	a
cadmium, total	table 1b	table 1b	20	10	170	5
chromium, total	a	40	1,000	100	a	100
chromium (III)	table 1b	table 1b	a	a	3,433,000	50
chromium (VI)	15	10	a	a	3,400	50
copper, total	table 1b	table 1b	500	200	a	1,300
lead, total	table 1b	table 1b	100	5,000	a	15
mercury, total	2.1	0.012	10	a	0.146	b
nickel, total	table 1b	table 1b	500	200	100	100
selenium, total	20	5	50	20	6,800	50
selenium (V)	11.2	a	a	a	a	a
silver, total	table 1b	a	a	a	a	50
thallium, total	1,400	40	a	a	b	2
zinc, total	table 1b	table 1b	25,000	2,000	a	a
OTHER INORGANIC SUBSTANCES (µg/L)						
ammonia	table 1c	table 1c	a	a	a	a
asbestos (µfibers/L)	a	a	a	a	a	7,000,000
chloride	860,000	352,000	a	a	a	250,000
chlorine, total residual	19	11	a	a	a	a
cyanide (free)	22	5.2	a	a	220,000	200
fluoride	a	a	2,000	1,000	a	2,000
nitrate (as N)	a	a	a	a	a	10,000
nitrite + nitrate (as N)	a	a	100,000	a	a	10,000
phosphorus, elemental (white)	a	0.1	a	a	a	a
sulfate	a	a	1,000,000	a	a	250,000

Table 1a. State Numeric criteria (continued).

PARAMETER	USE CATEGORY: AQUATIC LIFE ACUTE	AQUATIC LIFE CHRONIC	AGRICULTURE LIVESTOCK	AGRICULTURE IRRIGATION	PUBLIC HEALTH FOOD PROCUREMENT	PUBLIC HEALTH DOMESTIC WATER SUPPLY
ORGANIC SUBSTANCES (µg/L)						
Benzenes						
aminobenzene (analine)	14	6.7	a	a	a	a
benzene	5,300	a	a	a	40	b
chlorobenzene	250	50	a	a	21,000	100
dichlorobenzenes, total	1,120	763	a	a	2,600	a
o-dichlorobenzene	1,120	763	a	a	2,600	600
m-dichlorobenzene	1,120	763	a	a	2,600	b
p-dichlorobenzene	a	a	a	a	2,600	75
other chlorinated benzenes, total	250	50	a	a	a	a
1,2,4-trichlorobenzene	250	a	a	a	a	70
1,2,4,5-tetrachlorobenzene	250	50	a	a	48	a
pentachlorobenzene	250	50	a	a	85	a
hexachlorobenzene	6.0	3.7	a	a	0.00074	b
ethylbenzene	32,000	a	a	a	28,718	700
nitrobenzene	27,000	a	a	a	1,900	b
pentachloronitrobenzene	250	50	a	a	a	a
vinylbenzene (styrene)	a	a	a	a	a	100
Ethers						
chloroalkyl ethers, total	238,000	a	a	a	a	a
bis(2-chloroethyl)ether	238,000	a	a	a	1.36	b
bis(2-chloroisopropyl)ether	238,000	a	a	a	0.00184	b
bis(chloromethyl)ether	238,000	a	a	a	0.00184	a
2-chloroethyl vinyl ether	360	120	a	a	a	a
halogenated ethers, total	360	122	a	a	a	a
chloromethyl methyl ether	238,000	a	a	a	0.00184	a
4,4'-dibromodiphenyl ether	360	120	a	a	a	a
hexabromodiphenyl ether	360	120	a	a	a	a
nonabromodiphenyl ether	360	120	a	a	a	a
pentabromodiphenyl ether	360	120	a	a	a	a
tetrabromodiphenyl ether	360	120	a	a	a	a
tribromodiphenyl ether	360	120	a	a	a	a
Halogenated Hydrocarbons						
chlorinated ethanes						
1,2-dichloroethane	18,000	2,000	a	a	b	b
1,1,1-trichloroethane	18,000	a	a	a	173,077	200
1,1,2-trichloroethane	18,000	9,400	a	a	41.8	b
tetrachloroethanes, total	9,320	a	a	a	a	a
1,1,1,2-tetrachloroethane	9,320	a	a	a	a	a
1,1,2,2-tetrachloroethane	9,320	2,400	a	a	10.7	b
pentachloroethane	7,240	1,100	a	a	a	a
hexachloroethane	980	540	a	a	8.74	b
chlorinated ethylenes, total	11,600	a	a	a	1.85	a
1,1-dichloroethylene	11,600	a	a	a	1.85	b
cis-1,2-dichloroethylene	11,600	a	a	a	1.85	70
trans-1,2-dichloroethylene	11,600	a	a	a	140,000	100
trichloroethylene	45,000	21,900	a	a	80.7	b
tetrachloroethylene	5,280	840	a	a	8.85	b

Table 1a. State Numeric criteria (continued).

	USE CATEGORY					
	AQUATIC LIFE		AGRICULTURE		PUBLIC HEALTH	
PARAMETER	ACUTE	CHRONIC	LIVESTOCK	IRRIGATION	FOOD PROCUREMENT	DOMESTIC WATER SUPPLY
chlorinated propanes/propenes						
1,2-dichloropropane	23,000	5,700	9.0	a	39	5
1,3-dichloropropene	6,600	244	a	a	14.1	b
Other Halogenated Hydrocarbons						
halogenated methanes, total	11,000	a	a	a	15.7	100
bromomethane	11,000	a	a	a	15.7	b
1,2-dibromoethane	a	a	a	a	a	0.05
tribromomethane (bromoform)	11,000	a	a	a	15.7	b
bis(2-chloroethoxy) methane	11,000	a	a	a	15.7	a
bromodichloromethane	11,000	a	a	a	15.7	b
bromochloromethane	11,000	a	a	a	15.7	a
bromotrichloromethane	11,000	a	a	a	15.7	a
dibromochloromethane	11,000	a	a	a	15.7	b
dibromochloropropane	a	a	a	a	15.7	0.2
dibromodichloromethane	11,000	a	a	a	15.7	a
dichlorodifuoromethane	11,000	a	a	a	15.7	a
dichloromethane (methylene chloride)	11,000	a	a	a	1,600	4.7
trichloromethane (chloroform)	28,900	1,240	a	a	15.7	b
tribromochloromethane	11,000	a	a	a	15.7	a
trichlorofluoromethane	11,000	a	a	a	15.7	a
tetrachloromethane (carbon tetrachloride)	35,200	a	a	a	b	b
di(2-ethylhexyl)adipate	a	a	a	a	a	500
hexachlorobutadiene	90	9.3	a	a	50	b
hexachlorocyclopentadiene	7	5.2	a	a	206	50
vinyl chloride	a	a	a	a	525	2
Miscellaneous Organics						
dioxin (2,3,7,8 TCDD)	0.01	0.00001	a	a	0.000000014	b
isophorone	117,000	a	a	a	b	b
polychlorinated biphenyls, total	2	0.014	a	a	0.0000079	b
tributyltin oxide	0.149	0.026	a	a	a	a
Nitrogen Compounds						
nitrosamines, total	5,850	a	a	a	1.24	a
N-nitrosodibutylamine	5,850	a	a	a	0.587	a
N-nitrosodiethanolamine	5,850	a	a	a	1.24	a
N-nitrosodiethylamine	5,850	a	a	a	1.24	a
N-nitrosodimethylamine	5,850	a	a	a	1.6	b
N-nitrosodiphenylamine	5,850	a	a	a	16.0	b
N-nitrosodi-n-propylamine	a	a	a	a	1.24	a
N-nitrosopyrrolidine	5,850	a	a	a	91.9	a
acrylonitrile	7,550	2,600	a	a	0.65	b
benzidene	2,500	a	a	a	0.000535	b
3,3'-dichlorobenzidine	a	a	a	a	0.02	b
1,2-diphenyl hydrazine	270	a	a	a	0.54	b
Polynuclear Aromatic Hydrocarbons, total	a	a	a	a	0.0311	0.2
acenaphthene	1,700	520	a	a	a	1200
acenaphthylene	a	a	a	a	0.0311	a
anthracene	a	a	a	a	0.0311	b
benzo(a)anthracene	a	a	a	a	0.0311	b

Table 1a. State Numeric criteria (continued).

PARAMETER	USE CATEGORY: AQUATIC LIFE ACUTE	AQUATIC LIFE CHRONIC	AGRICULTURE LIVESTOCK	AGRICULTURE IRRIGATION	PUBLIC HEALTH FOOD PROCUREMENT	PUBLIC HEALTH DOMESTIC WATER SUPPLY
benzo(a)pyrene	a	a	a	a	0.0311	b
benzo(b)fluoranthene	a	a	a	a	0.0311	b
benzo(g,h,i)perylene	a	a	a	a	0.0311	a
benzo(k)fluoranthene	a	a	a	a	0.0311	b
chrysene	a	a	a	a	0.0311	b
dibenzo(a,h)anthracene	a	a	a	a	0.0311	b
fluoranthene	3,980	a	a	a	b	b
fluorene	a	a	a	a	0.0311	b
ideno(1,2,3-cd)pyrene	a	a	a	a	0.0311	b
naphthalene	2,300	620	a	a	a	a
phenanthrene	30	6.3	a	a	0.0311	a
pyrene	a	a	a	a	0.0311	b
Phthalate Esters						
phthalates, total	940	3	a	a	a	a
butylbenzyl phthalate	a	a	a	a	5,200	100
di(2-ethylhexyl)phthalate	400	360	a	a	b	b
dibutyl phthalate	940	3	a	a	b	b
diethyl phthalate	a	a	a	a	b	5
dimethyl phthalate	940	3	a	a	2,900,000	b
Phenolic Compounds						
phenol	10,200	2,560	a	a	4,600,000	b
2,4-dimethyl phenol	1,300	530	a	a	2,300	540
chlorinated phenols						
2-chlorophenol	4,380	2,000	a	a	400	120
3-chlorophenol	a	a	a	a	29,000	a
2,4-dichlorophenol	2,020	365	a	a	b	b
2,4,5-trichlorophenol	100	63	a	a	a	a
2,4,6-trichlorophenol	a	970	a	a	3.6	b
pentachlorophenol	table 1b	table 1b	a	a	8.2	b
3-methyl-4-chlorophenol	30	a	a	a	a	a
nitrophenols, total	230	150	a	a	a	a
2,4-dinitrophenol	a	a	a	a	765	b
4,6-dinitro-o-cresol	a	a	a	a	765	b
Toluenes.....						
toluene	17,500	a	a	a	b	1,000
dinitrotoluenes, total	330	230	a	a	9.1	a
2,4-dinitrotoluene	330	230	a	a	9.1	b
xylene	a	a	a	a	a	10,000
PESTICIDES (µg/L)						
acrolein	68	21	a	a	780	320
acrylamide	a	a	a	a	a	0.01
alachlor (lasso)	760	76	100	a	a	2
aldicarb	a	a	a	a	a	3
aldicarb sulfone	a	a	a	a	a	2
aldicarb sulfoxide	a	a	a	a	a	3
aldrin	3	0.001	1	a	0.000079	b
atrazine (aatrex)	170	3	a	a	a	3
bromoxynil (MCPA)	a	a	20	a	a	a

Table 1a. State Numeric criteria (continued).

PARAMETER	USE CATEGORY: AQUATIC LIFE ACUTE	AQUATIC LIFE CHRONIC	AGRICULTURE LIVESTOCK	AGRICULTURE IRRIGATION	PUBLIC HEALTH FOOD PROCUREMENT	PUBLIC HEALTH DOMESTIC WATER SUPPLY
carbaryl (sevin)	a	0.02	100	a	a	a
carbofuran (furadan)	a	a	100	a	a	40
chlordane	2.4	0.0043	3	a	0.00048	b
chlorpyrifos	0.083	0.041	100	a	a	a
2,4-D	a	a	a	a	a	70
dacthal (DCPA)	a	14,300	a	a	a	a
dalapon	a	110	a	a	a	200
diazinon (spectracide)	a	0.08	100	a	a	a
DDT and Metabolites						
4,4'-DDE (p,p'-DDE)	1,050	a	a	a	0.00059	b
4,4'-DDD (p,p'-DDD)	a	a	a	a	0.00084	b
DDT, total	1.1	0.001	50	a	0.000024	b
dieldrin	1.0	0.0019	1	a	0.000076	b
dinoseb (DNBP)	a	a	a	a	a	7
diquat	a	a	a	a	a	20
disulfoton (disyston)	a	a	100	a	a	a
endosulfan, total	0.22	0.056	a	a	159	b
alpha-endosulfan	0.22	0.056	a	a	2	b
beta-endosulfan	0.22	0.056	a	a	2	b
endosulfan sulfate	a	a	a	a	b	b
endothall	a	a	a	a	a	100
endrin	0.18	0.0023	0.5	a	0.76	b
endrin aldehyde	a	a	a	a	0.81	b
epichlorohydrin	a	a	a	a	a	4
ethylene dibromide	a	a	a	a	a	0.05
fenchlorfos (ronnel)	a	a	100	a	a	a
glyphosate (roundup)	a	a	a	a	a	700
guthion	a	0.010	100	a	a	a
heptachlor	0.52	0.0038	0.1	a	0.00021	b
heptachlor epoxide	0.52	0.0038	0.1	a	b	b
hexachlorocyclohexane	100	a	a	a	a	a
alpha-HCH	100	a	a	a	0.0031	b
beta-HCH	100	a	a	a	b	b
delta-HCH	100	a	a	a	a	a
gamma-HCH (lindane)	2	0.08	5	a	0.0625	b
technical-HCH	a	a	a	a	0.0414	a
malathion	a	0.10	100	a	a	a
methoxychlor	a	0.03	1000	a	a	40
methyl parathion	a	a	100	a	a	a
metribuzin (sencor)	a	100	a	a	a	a
mirex	a	0.001	a	a	0.000097	a
oxamyl (vydate)	a	a	a	a	a	200
parathion	0.065	0.013	100	a	a	a
picloram (tordon)	a	a	a	a	a	500
propachlor (ramrod)	a	8	a	a	a	a
simazine (princep)	a	a	10	a	a	4
toxaphene	0.73	0.0002	5	a	0.00073	b
2,4,5-T	a	a	2	a	a	a
2,4,5-TP (silvex)	a	a	a	a	a	50

a - criterion not available
b - US EPA has promulgated criterion for Kansas under the Code of Federal Regulations, Title 40, Part 131.36

Table 1b. Formulae for calculation of hardness-dependent aquatic life support criteria for chromium III and total cadmium, total copper, total lead, total nickel, total silver and total zinc and pH-dependent aquatic life support criteria for pentachlorophenol. A WER value of 1.0 is applied in the hardness-dependent equations for total metals unless a site-specific WER has been determined and adopted by the department in accordance with K.A.R. 28-16-28e(a) and K.A.R. 28-16-28f(f). Hardness values in metal formulae are entered in units of mg/L as $CaCO_3$. Pentachlorophenol formulae apply only over the pH range 6.5-8.5.

CADMIUM (ug/L):
acute criterion = WER[EXP[(1.1280*(LN(hardness)))-3.6867]]
chronic criterion = WER[EXP[(0.7852*(LN(hardness)))-2.715]]

CHROMIUM III (ug/L):
acute criterion = WER[EXP[(0.819*(LN(hardness)))+3.7256]]
chronic criterion = WER[EXP[(0.819*(LN(hardness)))+0.6848]]

COPPER (ug/L):
acute criterion = WER[EXP[(0.9422*(LN(hardness)))-1.700]]
chronic criterion = WER[EXP[(0.8545*(LN(hardness)))-1.702]]

LEAD (ug/L):
acute criterion = WER[EXP[(1.273*(LN(hardness)))-1.460]]
chronic criterion = WER[EXP[(1.273*(LN(hardness)))-4.705]]

NICKEL (ug/L):
acute criterion = WER[EXP[(0.846*(LN(hardness)))+2.255]]
chronic criterion = WER[EXP[(0.846*(LN(hardness))+0.0584]]

PENTACHLOROPHENOL (ug/L):
acute criterion = EXP[(1.005*pH)-4.830]
chronic criterion = EXP[(1.005*pH)-5.290]

SILVER (ug/L):
acute criterion = WER[EXP[(1.72*(LN(hardness)))-6.52]]

ZINC (ug/L):
acute criterion = WER[EXP[(0.8473*(LN(hardness)))+0.884]]
chronic criterion = WER[EXP[(0.8473*(LN(hardness)))+0.884]]

Table 1c. pH-dependent acute and chronic aquatic life support criteria for total ammonia. (Total Ammonia as N, mg/L)

pH	Acute criteria	Chronic criteria
6.50	48.8	3.480
6.75	43.3	3.330
7.00	36.1	3.080
7.25	27.9	2.700
7.50	19.9	2.280
7.75	13.3	1.760
8.00	8.40	1.270
8.25	5.20	0.863
8.50	3.20	0.568
8.75	2.01	0.374
9.00	1.32	0.254

Refer to Kansas Implementation Procedures for application of wintertime criteria and default low flow related to ammonia.

[Code of Federal Regulations]
[Title 40, Volume 12, Parts 87 to 135]
[Revised as of July 1, 1997]
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[CITE: 40CFR131.36]

TITLE 40--PROTECTION OF ENVIRONMENT

CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

PART 131--WATER QUALITY STANDARDS

131.36c

(9) Kansas, EPA Region 7.

(i) All waters assigned to the following use classification in the Kansas Department of Health and Environment regulations, K.A.R. 28-16-28b through K.A.R. 28-16-28f, are subject to the criteria in paragraph (d)(9)(ii) of this section, without exception.

Section 28-16-28d
Section (2)(A)--Special Aquatic Life Use Waters
Section (2)(B)--Expected Aquatic Life Use Waters
Section (2)(C)--Restricted Aquatic Life Use Waters
Section (3)--Domestic Water Supply
Section (6)(c)--Consumptive Recreation Use.

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(9)(i) of this section:

Use classification	Applicable criteria
Sections (2)(A), (2)(B), (2)(C), (6)(C)	These classifications are each assigned all criteria in: Column B1, all except 9, 11, 13, 102, 105, 107, 108, 111-113, 115, 117, and 126; Column B2, all except 9, 13, 105, 107, 108, 111-113, 115, 117, 119-125, and 126; and

National Toxics Rule (NTR) Criteria footnoted in Table 1a. of K.A.R. 28-16-28e with a "b"		
Parameter	**NTR Domestic H_20 Supply (μg/l)**	**NTR Food Procurement (μg/l)**
benzene	1.2	-
m-dichlorobenzene	400	-
hexachlorobenzene	0.00075	-
nitrobenzene	17	-
bis(2-chloroethyl)ether	0.031	-
bis(2-chloroisopropyl)ether	1,400	-
1,2-dichloroethane	0.38	99
1,1,2-trichloroethane	0.6	-
1,1,2,2-tetrachloroethane	0.17	-
hexachloroethane	1.9	-
1,1-dichloroethylene	0.057	-
trichloroethylene	2.7	-
tetrachloroethylene	0.8	-
1,3-dichloropropene	10	-
bromomethane	48.0	-
tribromomethane (bromoform)	4.3	-
bromodichloromethane (dichlorobromomethane)	0.27	-
dibromochloromethane (chlorodibromomethane)	0.41	-
trichloromethane (chloroform)	5.7	-
tetrachloromethane (carbon tetrachloride)	0.25	4.4
hexachlorobutadiene	0.44	-
dioxin (2,3,7,8)	$1.3x10^{-8}$	-
isophorone	8.4	600

polychlorinated biphenyls, total (PCBs)	0.00004	-
N-nitrosodimethylamine	0.00069	-
N-nitrosodiphenylamine	5	16
acrylonitrile	0.059	-
benzidene	0.00012	-
3,3'-dichlorobenzidine	0.04	-
1,2-diphenyl hydrazine	0.04	0.54
anthracene	9,600	-
benzo(a)anthracene	0.0028	-
benzo(a)pyrene	0.0028	-
benzo(b)fluoranthene	0.0028	-
benzo(k)fluoranthene	0.0028	-
chrysene	0.0028	-
dibenzo(a,h)anthracene	0.0028	-
fluoranthene	300	370
flourene	1,300	-
ideno(1,2,3-cd)pyrene	0.0028	-
pyrene	960	-
di(2-ethylhexyl)phthalate	1.8	5.9
dibutyl phthalate (di-n-butyl phthalate)	2,700	12,000
diethyl phtalate	-	120,000
dimethyl phthalate	313,000	-
phenol	21,000	-
2,4-dichlorophenol	93	790
2,4,6-trichlorophenol	2.1	-
pentachlorophenol	0.28	-
2,4-dinitrophenol	70	-
4,6-dinitro-o-cresol	13.4	-
toluene	-	200,000

2,4-dinitrotoluene	0.11	-
aldrin	0.00013	-
chlordane	0.00057	-
4,4'DDE (p,p'-DDE)	0.00059	-
4,4'-DDD (p,p'-DDD)	0.00083	-
DDT, total	0.00059	-
dieldrin	0.00014	-
endosulfan, total	0.93	2
alpha-endosulfan	0.93	2
beta-endosulfan	0.93	2
endosulfan sulfate	0.93	2
endrin	0.76	-
endrin aldehyde	0.76	-
heptachlor	0.00021	0.00021
heptachlor epoxide	0.0001	0.00011
alpha-HCH	0.0039	-
beta-HCH	0.014	0.046
gamma-HCH (lindane)	0.019	-
toxaphene	0.00073	-

Appendix C

Reasonable Potential Methodology

Attachment

Region 6 Approach
Determining Reasonable Potential

Region 6 has developed a procedure to extrapolate limited datasets to better evaluate the potential for the higher effluent concentrations to exceed a State water quality standard. Our method yields an estimate of a selected upper percentile value. We believe that the most statistically valid estimate of an upper percentile value is a maximum likelihood estimator which is proportional to the population geometric mean. If one assumes the population of effluent concentrations to fit a lognormal distribution, this relationship is given by:

$$C_p = C_{mean} * \exp\ (Z_p * \sigma - 0.5 * \sigma^2)$$

where: Z_p = normal distribution factor at p^{th} percentile

$$\sigma^2 = \ln(CV^2 + 1)$$

To calculate the maximum likelihood estimator of the 95th percentile, the specific relationship becomes:

$$C_{95} = C_{mean} * \exp\ (1.645 * \sigma - 0.5 * \sigma^2)$$

if CV is assumed = 0.6,
$\sigma^2 = .307$

The ratio of the estimated 95th percentile value to the mean (C_{95}/C_{mean}) is calculated :

$$C_{95}/C_{mean} = 2.13$$

A single effluent value or the geometric mean of a group of values is multiplied by the ratio to yield the estimate of the 95th percentile value.

The following table shows the ratio of the upper percentile to the mean for the 90th, 95th, and 99th percentiles

Ratio of Upper Percentiles to Geometric Mean

Percentile	Z	C_p/C_{mean}
90	1.283	1.74
95	1.645	2.13
99	2.386	3.11

EXAMPLE
DETERMINING REASONABLE POTENTIAL
REGION 6 PROTOCOL

The outcome of this approach is illustrated in the following example:

Assume a discharger has reported 3 effluent concentrations of cadmium [9 ug/l, 12 ug/l, 15 ug/l]. The discharge flow is 3 mgd, the receiving stream critical flow is 6.4 mgd. The ambient chronic standard for cadmium is 6 ug/l as total metal. Assume 100% mix at the point of discharge and that the upstream concentration of cadmium is nondetectable. Evaluate the potential of the discharge to exceed water quality standards by assessing the impact of the 95th percentile effluent cadmium concentration.

1. Estimation of 95th percentile (Regional Approach)

The geometric mean effluent concentration of 12 ug/l is used as a parameter to estimate the 95th percentile value, assuming a lognormal distribution and a coefficient of variation of 0.6.

$C_{95} = C_{mean} * \exp (1.283 * \sigma - 0.5 * \sigma^2)$

$\sigma^2 = \ln (CV^2 + 1)$

$C_{95}/C_{mean} = 2.13$

12 ug/l *2.13 = 25.6 ug/l

The 95th percentile effluent value is used to calculate the Instream Waste Concentration:

2. Determination of Instream Waste Concentration

$Cd = [(Qr * Ca) + (Qe*Ce)]/(Qr + Qe)$

where
Cd= ambient concentration of cadmium after mix (Instream Waste Concentration)
Qr=river flow
Qe=effluent flow
Ca=upstream concentration of cadmium
Ce= maximum effluent concentration of cadmium

Cd = [(6.4 x 0) + (3 mgd*26 ug/l)]/(6.4 mgd + 3 mgd)
= 8.2 ug/l

The IWC of 8.2 ug/l exceeds the ambient standard of 6.0 ug/l, a limit would be placed in the permit.

Use of other Upper Percentiles

The 90th percentile effluent value would be estimated as follows:

12 ug/l * 1.74 = 21 ug/l cadmium

The IWC would be calculated:
[(6.4 x 0) + (3 mgd * 21 ug/l)]/(6.4 mgd + 3 mgd)
=6.6 ug/l cadmium

The 99th percentile effluent value would be estimated as follows:

12 ug/l * 3.11= 37 ug/l cadmium

The IWC would be calculated
[(6.4 x 0) + (3 mgd *37 ug/l)]/ (6.4 mgd + 3 mgd)
=12 ug/l cadmium

As one selects more extreme tail values at which to evaluate potential water quality exceedances, the reported effluent concentrations must decrease to conclude that the potential to exceed the standard is not present.

Dealing with Highly Variable Datasets

The example above assumes that the coefficient of variation, defined as the ratio of the standard deviation to the mean, is 0.6. If multiple effluent concentrations are reported which exhibit a large range between the highest and lowest values, the statistical variance of this population of numbers may well be greater than 0.6.

One can calculate the geometric mean of a group of numbers as follows:

1. Take the logarithm of each pollutant value.

2. Sum the logarithmically transformed values.

3. Divide the sum of transformed data by the number of measurements.

4. Express the geometric mean pollutant value by determining the antilog of the average of the logarithmically transformed values.

Dealing with Large Datasets

When a larger dataset of pollutant measurements is available, one may not need to statistically estimate the upper range or 95th percentile as described above. It is suggested that the 95th percentile be determined from the data and compared to the statistical estimation, the larger of these values should be assumed as the reasonably potential concentration of the discharge.

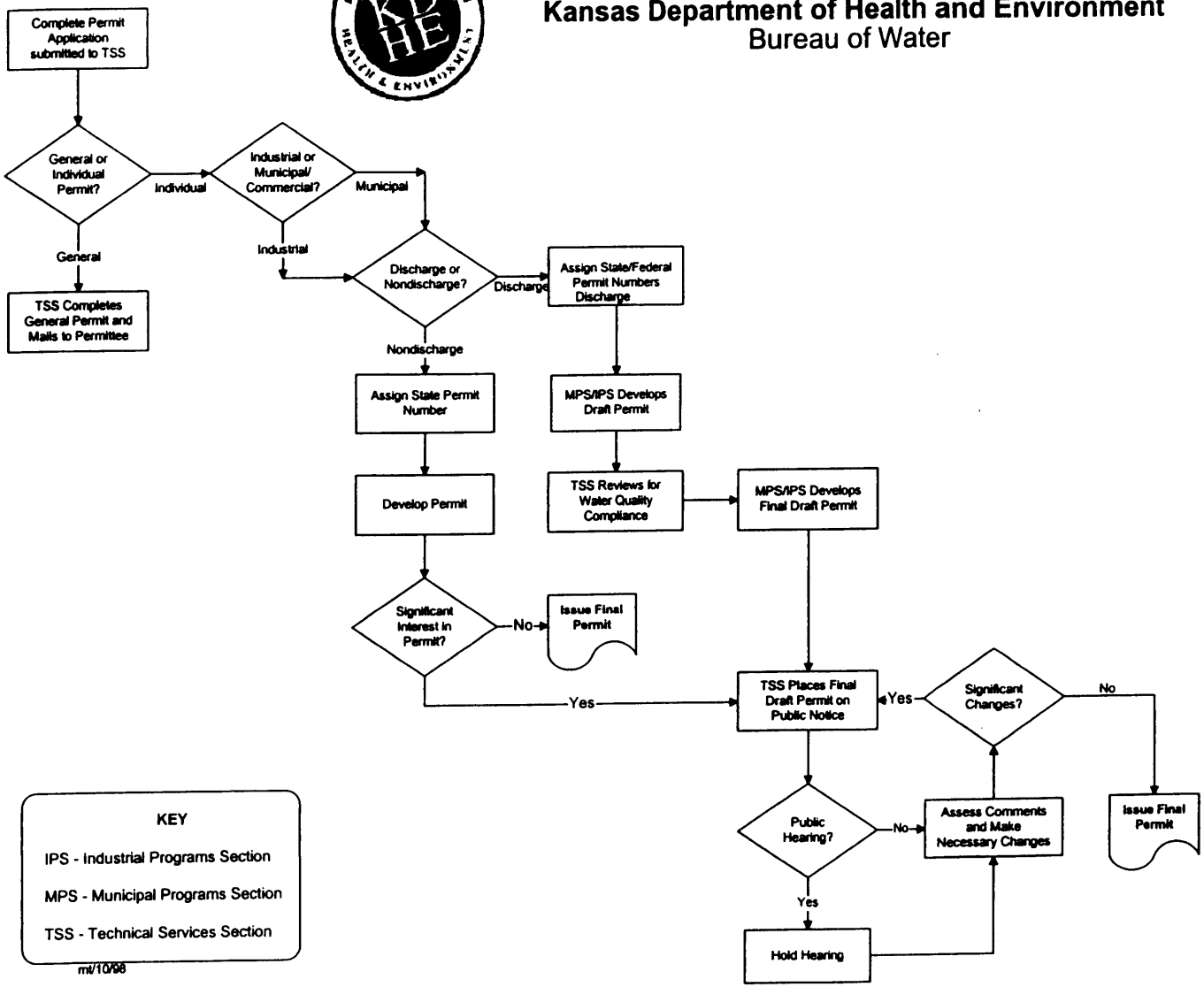
Appendix D

Permitting Process

Wastewater Permitting Process

Kansas Department of Health and Environment

Bureau of Water



mt/10/98

South Nanamkin Creek	Class III
Spring Creek	Class III
Stapaloop Creek	Class III
Stepstone Creek	Class III
Stranger Creek	Class II
Strawberry Creek	Class III
Swimptkin Creek	Class III
Three Forks Creek	Class I
Three Mile Creek	Class III
Thirteen Mile Creek	Class II
Thirty Mile Creek	Class II
Trail Creek	Class III
Twentyfive Mile Creek	Class III
Twentyone Mile Creek	Class III
Twentythree Mile Creek	Class III
Wannacot Creek	Class III
Wells Creek	Class I
Whitelaw Creek	Class III
Wilmont Creek	Class II

(2) Lakes:

Apex Lake	LC
Big Goose Lake	LC
Bourgeau Lake	LC
Buffalo Lake	LC
Cody Lake	LC
Crawfish Lakes	LC
Camille Lake	LC
Elbow Lake	LC
Fish Lake	LC
Gold Lake	LC
Great Western Lake	LC
Johnson Lake	LC
LaFleur Lake	LC
Little Goose Lake	LC
Little Owhi Lake	LC
McGinnis Lake	LC
Nicholas Lake	LC
Omak Lake	SRW
Owhi Lake	SRW
Penley Lake	SRW
Rebecca Lake	LC
Round Lake	LC
Simpson Lake	LC
Soap Lake	LC
Sugar Lake	LC
Summit Lake	LC
Twin Lakes	SRW

[54 FR 28625, July 6, 1989]

§ 131.36 Toxics criteria for those states not complying with Clean Water Act section 303(c)(2)(B).

(a) *Scope.* This section is not a general promulgation of the section 304(a) criteria for priority toxic pollutants but is restricted to specific pollutants in specific States.

(b)(1) EPA's Section 304(a) criteria for Priority Toxic Pollutants.

A			B Freshwater		C Saltwater		D Human Health (10^{-6} risk for carcinogens) For consumption of:	
(#)	Compound	CAS Number	Criterion Maximum Conc. [d] (µg/L) B1	Criterion Continuous Conc. [d] (µg/L) B2	Criterion Maximum Conc. [d] (µg/L) C1	Criterion Continuous Conc. [d] (µg/L) C2	Water & Organisms (µg/L) D1	Organisms Only (µg/L) D2
1	Antimony	7440360					14 a	4300 a
2	Arsenic	7440382	360 m	190 m	69 m	36 m	0.018 abc	0.14 abc
3	Beryllium	7440417					n	n
4	Cadmium	7440439	3.7 e	1.0 e	42 m	9.3 m	n	n
5a	Chromium (III)	16065831	550 e	180 e			n	n
b	Chromium (VI)	18540299	15 m	10 m	1100 m	50 m	n	n
6	Copper	7440508	17 e	11 e	2.4 m	2.4 m		
7	Lead	7439921	65 e	2.5 e	210 m	8.1 m	n	n
8	Mercury	7439976	2.1 m	0.012 ip	1.8 m	0.025 ip	0.14	0.15
9	Nickel	7440020	1400 e	160 e	74 m	8.2 m	610 a	4600 a
10	Selenium	7782492	20 p	5 p	290 m	71 m	n	n
11	Silver	7440224	3.4 e		1.9 m			
12	Thallium	7440280					1.7 a	6.3 a
13	Zinc	7440666	110 e	100 e	90 m	81 m		
14	Cyanide	57125	22	5.2	1	1	700 a	220000 aj
15	Asbestos	1332214					7,000,000 fibers/L k	
16	2,3,7,8-TCDD (Dioxin)	1746016					0.000000013 c	0.000000014 c
17	Acrolein	107028					320	780
18	Acrylonitrile	107131					0.059 ac	0.66 ac
19	Benzene	71432					1.2 ac	71 ac
20	Bromoform	75252					4.3 ac	360 ac
21	Carbon Tetrachloride	56235					0.25 ac	4.4 ac
22	Chlorobenzene	108907					680 a	21000 aj
23	Chlorodibromomethane	124481					0.41 ac	34 ac
24	Chloroethane	75003						
25	2-Chloroethylvinyl Ether	110758						
26	Chloroform	67663					5.7 ac	470 ac
27	Dichlorobromomethane	75274					0.27 ac	22 ac
28	1,1-Dichloroethane	75343						
29	1,2-Dichloroethane	107062					0.38 ac	99 ac
30	1,1-Dichloroethylene	75354					0.057 ac	3.2 ac
31	1,2-Dichloropropane	78875						
32	1,3-Dichloropropylene	542756					10 a	1700 a

A		B Freshwater		C Saltwater		D Human Health (10^{-6} risk for carcinogens) For consumption of:	
(#) Compound	CAS Number	Criterion Maximum Conc. [d] (µg/L) B1	Criterion Continuous Conc. [d] (µg/L) B2	Criterion Maximum Conc. [d] (µg/L) C1	Criterion Continuous Conc. [d] (µg/L) C2	Water & Organisms (µg/L) D1	Organisms Only (µg/L) D2
33 Ethylbenzene	100414					3100 a	29000 a
34 Methyl Bromide	74839					48 a	4000 a
35 Methyl Chloride	74873					n	n
36 Methylene Chloride	75092					4.7 ac	1600 ac
37 1,1,2,2-Tetrachloroethane	79345					0.17 ac	11 ac
38 Tetrachloroethylene	127184					0.8 c	8.85 c
39 Toluene	108883					6800 a	200000 a
40 1,2-Trans-Dichloro-ethylene	156605						
41 1,1,1-Trichloroethane	71556					n	n
42 1,1,2-Trichloroethane	79005					0.60 ac	42 ac
43 Trichloroethylene	79016					2.7 c	81 c
44 Vinyl Chloride	75014					2 c	525 c
45 2-Chlorophenol	95578						
46 2,4-Dichlorophenol	120832					93 a	790 aj
47 2,4-Dimethylphenol	105679						
48 2-Methyl-4,6-Dinitrophenol	534521					13.4	765
49 2,4-Dinitrophenol	51285					70 a	14000 a
50 2-Nitrophenol	88755						
51 4-Nitrophenol	100027						
52 3-Methyl-4-Chlorophenol	59507						
53 Pentachlorophenol	87865	20 f	13 f	13	7.9	0.28 ac	8.2 acj
54 Phenol	108952					21000 a	4600000 aj
55 2,4,6-Trichlorophenol	88062					2.1 ac	6.5 ac
56 Acenaphthene	83329						
57 Acenaphthylene	208968						
58 Anthracene	120127					9600 a	110000 a
59 Benzidine	92875					0.00012 ac	0.00054 ac
60 Benzo(a)Anthracene	56553					0.0028 c	0.031 c
61 Benzo(a)Pyrene	50328					0.0028 c	0.031 c
62 Benzo(b)Fluoranthene	205992					0.0028 c	0.031 c

63	Benzo(ghi)Perylene	191242						
64	Benzo(k)Fluoranthene	207089					0.0028 c	0.031 c
65	Bis(2-Chloro-ethoxy)Methane	111911						
66	Bis(2-Chloroethyl)Ether	111444					0.031 ac	1.4 ac
67	Bis(2-Chloroiso-propyl)Ether	108601					1400 a	170000 a
68	Bis(2-Ethyl-hexyl)Phthalate	117817					1.8 ac	5.9 ac
69	4-Bromophenyl Phenyl Ether	101553						
70	Butylbenzyl Phthalate	85687						
71	2-Chloronaphthalene	91587						
72	4-Chlorophenyl Phenyl Ether	7005723						
73	Chrysene	218019					0.0028 c	0.031 c
74	Dibenzo(ah)Anthracene	53703					0.0028 c	0.031 c
75	1,2-Dichlorobenzene	95501					2700 a	17000 a
76	1,3-Dichlorobenzene	541731					400	2600
77	1,4-Dichlorobenzene	106467					400	2600
78	3,3′-Dichlorobenzidine	91941					0.04 ac	0.077 ac
79	Diethyl Phthalate	84662					23000 a	120000 a
80	Dimethyl Phthalate	131113					313000	2900000
81	Di-n-Butyl Phthalate	84742					2700 a	12000 a
82	2,4-Dinitrotoluene	121142					0.11 c	9.1 c
83	2,6-Dinitrotoluene	606202						
84	Di-n-Octyl Phthalate	117840						
85	1,2-Diphenylhydrazine	122667					0.040 ac	0.54 ac
86	Fluoranthene	206440					300 a	370 a
87	Fluorene	86737					1300 a	14000 a
88	Hexachlorobenzene	118741					0.00075 ac	0.00077 ac
89	Hexachlorobutadiene	87683					0.44 ac	50 ac
90	Hexachlorocyclopenta-diene	77474					240 a	17000 aj
91	Hexachloroethane	67721					1.9 ac	8.9 ac
92	Indeno(1,2,3-cd)Pyrene	193395					0.0028 c	0.031 c
93	Isophorone	78591					8.4 ac	600 ac
94	Naphthalene	91203						
95	Nitrobenzene	98953					17 a	1900 aj
96	N-Nitrosodimethylamine	62759					0.00069 ac	8.1 ac
97	N-Nitrosodi-n-Propyl-amine	621647						
98	N-Nitrosodiphenylamine	86306					5.0 ac	16 ac
99	Phenanthrene	85018						

A		B Freshwater		C Saltwater		D Human Health (10^{-6} risk for carcinogens) For consumption of:	
(#) Compound	CAS Number	Criterion Maximum Conc. [d] (µg/L) B1	Criterion Continuous Conc. [d] (µg/L) B2	Criterion Maximum Conc. [d] (µg/L) C1	Criterion Continuous Conc. [d] (µg/L) C2	Water & Organisms (µg/L) D1	Organisms Only (µg/L) D2
100 Pyrene	129000					960 a	11000 a
101 1,2,4-Trichlorobenzene	120821						
102 Aldrin	309002	3 g		1.3 g		0.00013 ac	0.00014 ac
103 alpha-BHC	319846					0.0039 ac	0.013 ac
104 beta-BHC	319857					0.014 ac	0.046 ac
105 gamma-BHC	58899	2 g	0.08 g	0.16 g		0.019 c	0.063 c
106 delta-BHC	319868						
107 Chlordane	57749	2.4 g	0.0043 g	0.09 g	0.004 g	0.00057 ac	0.00059 ac
108 4,4′-DDT	50293	1.1 g	0.001 g	0.13 g	0.001 g	0.00059 ac	0.00059 ac
109 4,4′-DDE	72559					0.00059 ac	0.00059 ac
110 4,4′-DDD	72548					0.00083 ac	0.00084 ac
111 Dieldrin	60571	2.5 g	0.0019 g	0.71 g	0.0019 g	0.00014 ac	0.00014 ac
112 alpha-Endosulfan	959988	0.22 g	0.056 g	0.034 g	0.0087 g	0.93 a	2.0 a
113 beta-Endosulfan	33213659	0.22 g	0.056 g	0.034 g	0.0087 g	0.93 a	2.0 a
114 Endosulfan Sulfate	1031078					0.93 a	2.0 a
115 Endrin	72208	0.18 g	0.0023 g	0.037 g	0.0023 g	0.76 a	0.81 aj
116 Endrin Aldehyde	7421934					0.76 a	0.81 aj
117 Heptachlor	76448	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00021 ac	0.00021 ac
118 Heptachlor Epoxide	1024573	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00010 ac	0.00011 ac
119 PCB–1242	53469219		0.014 g		0.03 g		
120 PCB–1254	11097691		0.014 g		0.03 g		
121 PCB–1221	11104282		0.014 g		0.03 g		
122 PCB–1232	11141165		0.014 g		0.03 g		
123 PCB–1248	12672296		0.014 g		0.03 g		
124 PCB–1260	11096825		0.014 g		0.03 g		
125a PCB–1016	12674112		0.014 g		0.03 g		
125b Polychlorinated biphenyls (PCBs)						0.00017 q	0.00017 q
126 Toxaphene	8001352	0.73	0.0002	0.21	0.0002	0.00073 ac	0.00075 ac
Total Number of Criteria (h) =		24	29	23	27	85	84

FOOTNOTES

a. Criteria revised to reflect current agency q_1* or RfD, as contained in the Integrated Risk Information System (IRIS). The fish tissue bioconcentration factor (BCF) from the 1980 criteria documents was retained in all cases.

b. The criteria refers to the inorganic form only.

c. Criteria in the matrix based on carcinogenicity (10^{-6} risk). For a risk level of 10^{-5}, move the decimal point in the matrix value one place to the right.

d. Criteria Maximum Concentration (CMC) = the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (1-hour average) without deleterious effects. Criteria Continuous Concentration (CCC) = the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. µg/L = micrograms per liter.

e. Freshwater aquatic life criteria for these metals are expressed as a function of total hardness (mg/L as $CaCO_3$), the pollutant's water effect ratio (WER) as defined in §131.36(c) and multiplied by an appropriate dissolved conversion factor as defined in §131.36(b)(2). For comparative purposes, the values displayed in this matrix are shown as dissolved metal and correspond to a total hardness of 100 mg/L and a water effect ratio of 1.0.

f. Freshwater aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows. Values displayed above in the matrix correspond to a pH of 7.8.

$$CMC = \exp(1.005(pH) - 4.830)$$
$$CCC = \exp(1.005(pH) - 5.290)$$

g. Aquatic life criteria for these compounds were issued in 1980 utilizing the 1980 Guidelines for criteria development. The acute values shown are final acute values (FAV) which by the 1980 Guidelines are instantaneous values as contrasted with a CMC which is a one-hour average.

h. These totals simply sum the criteria in each column. For aquatic life, there are 31 priority toxic pollutants with some type of freshwater or saltwater, acute or chronic criteria. For human health, there are 85 priority toxic pollutants with either ''water + fish'' or ''fish only'' criteria. Note that these totals count chromium as one pollutant even though EPA has developed criteria based on two valence states. In the matrix, EPA has assigned numbers 5a and 5b to the criteria for chromium to reflect the fact that the list of 126 priority toxic pollutants includes only a single listing for chromium.

i. If the CCC for total mercury exceeds 0.012 µg/l more than once in a 3-year period in the ambient water, the edible portion of aquatic species of concern must be analyzed to determine whether the concentration of methyl mercury exceeds the FDA action level (1.0 mg/kg). If the FDA action level is exceeded, the State must notify the appropriate EPA Regional Administrator, initiate a revision of its mercury criterion in its water quality standards so as to protect designated uses, and take other appropriate action such as issuance of a fish consumption advisory for the affected area.

j. No criteria for protection of human health from consumption of aquatic organisms (excluding water) was presented in the 1980 criteria document or in the 1986 Quality Criteria for Water. Nevertheless, sufficient information was presented in the 1980 document to allow a calculation of a criterion, even though the results of such a calculation were not shown in the document.

k. The criterion for asbestos is the MCL (56 FR 3526, January 30, 1991).

l. [Reserved: This letter not used as a footnote.]

m. Criteria for these metals are expressed as a function of the water effect ratio, WER, as defined in 40 CFR 131.36(c).

$$CMC = \text{column B1 or C1 value} \times WER$$
$$CCC = \text{column B2 or C2 value} \times WER$$

n. EPA is not promulgating human health criteria for this contaminant. However, permit authorities should address this contaminant in NPDES permit actions using the State's existing narrative criteria for toxics.

o. [Reserved: This letter not used as a footnote.]

p. Criterion expressed as total recoverable.

q. This criterion applies to total PCBs (*e.g.*, the sum of all congener or isomer or homolog or Aroclor analyses).

GENERAL NOTES

1. This chart lists all of EPA's priority toxic pollutants whether or not criteria recommendations are available. Blank spaces indicate the absence of criteria recommendations. Because of variations in chemical nomenclature systems, this listing of toxic pollutants does not duplicate the listing in Appendix A of 40 CFR Part 423. EPA has added the Chemical Abstracts Service (CAS) registry numbers, which provide a unique identification for each chemical.

2. The following chemicals have organoleptic based criteria recommendations that are not included on this chart (for reasons which are discussed in the preamble): copper, zinc, chlorobenzene, 2-chlorophenol, 2,4-dichlorophenol, acenaphthene, 2,4-dimethylphenol, 3-methyl-4-chlorophenol, hexachlorocyclopentadiene, pentachlorophenol, phenol.

3. For purposes of this rulemaking, freshwater criteria and saltwater criteria apply as specified in 40 CFR 131.36(c).

NOTE TO PARAGRAPH (B)(1): On April 14, 1995, the Environmental Protection Agency issued

a stay of certain criteria in paragraph (b)(1) of this section as follows: the criteria in columns B and C for arsenic, cadmium, chromium (VI), copper, lead, nickel, silver, and zinc; the criteria in B1 and C1 for mercury; the criteria in column B for chromium (III); and the criteria in column C for selenium. The stay remains in effect until further notice.

(2) Factors for Calculating Hardness-Dependent, Freshwater Metals Criteria

CMC=WER exp { m_A[ln(hardness)]+b_A} x Acute Conversion Factor

CCC=WER exp { m_C[ln(hardness)]+b_C} x Chronic Conversion Factor

Final CMC and CCC values should be rounded to two significant figures.

Metal	m_A	b_A	m_C	b_C	Freshwater conversion factors	
					Acute	Chronic
Cadmium	1.128	–3.828	0.7852	–3.490	[a] 0.944	[a] 0.909
Chromium (III)	0.8190	3.688	0.8190	1.561	0.316	0.860
Copper	0.9422	–1.464	0.8545	–1.465	0.960	0.960
Lead	1.273	-1.460	1.273	–4.705	[a] 0.791	[a] 0.791
Nickel	0.8460	3.3612	0.8460	1.1645	0.998	0.997
Silver	1.72	–6.52	[b] N/A	[b] N/A	0.85	[b] N/A
Zinc	0.8473	0.8604	0.8473	0.7614	0.978	0.986

Note to table: The term ''exp'' represents the base e exponential function.

Footnotes to table:

[a] The freshwater conversion factors (CF) for cadmium and lead are hardness-dependent and can be calculated for any hardness [see limitations in § 131.36(c)(4)] using the following equations:

Cadmium
Acute: CF=1.136672—[(ln hardness)(0.041838)]
Chronic: CF=1.101672—[(ln hardness)(0.041838)]
Lead (Acute and Chronic): CF = 1.46203—[(ln hardness)(0.145712)]

[b] No chronic criteria are available for silver.

(c) *Applicability*. (1) The criteria in paragraph (b) of this section apply to the States' designated uses cited in paragraph (d) of this section and supersede any criteria adopted by the State, except when State regulations contain criteria which are more stringent for a particular use in which case the State's criteria will continue to apply.

(2) The criteria established in this section are subject to the State's general rules of applicability in the same way and to the same extent as are the other numeric toxics criteria when applied to the same use classifications including mixing zones, and low flow values below which numeric standards can be exceeded in flowing fresh waters.

(i) For all waters with mixing zone regulations or implementation procedures, the criteria apply at the appropriate locations within or at the boundary of the mixing zones; otherwise the criteria apply throughout the waterbody including at the end of any discharge pipe, canal or other discharge point.

(ii) A State shall not use a low flow value below which numeric standards can be exceeded that is less stringent than the following for waters suitable for the establishment of low flow return frequencies (i.e., streams and rivers):

AQUATIC LIFE	
Acute criteria (CMC)	1 Q 10 or 1 B 3
Chronic criteria (CCC)	7 Q 10 or 4 B 3
HUMAN HEALTH	
Non-carcinogens	30 Q 5
Carcinogens	Harmonic mean flow

Where:

CMC—criteria maximum concentration—the water quality criteria to protect against acute effects in aquatic life and is the highest instream concentration of a priority toxic pollutant consisting of a one-hour average not to be exceeded more than once every three years on the average;

CCC—criteria continuous concentration—the water quality criteria to protect against chronic effects in aquatic life is the highest instream concentration of a priority toxic pollutant consisting of a 4-day average not to be exceeded more than once every three years on the average;

1 Q 10 is the lowest one day flow with an average recurrence frequency of once in 10 years determined hydrologically;

1 B 3 is biologically based and indicates an allowable exceedence of once every 3 years. It is determined by EPA's computerized method (DFLOW model);

7 Q 10 is the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years determined hydrologically;

4 B 3 is biologically based and indicates an allowable exceedence for 4 consecutive days once every 3 years. It is determined by EPA's computerized method (DFLOW model);

30 Q 5 is the lowest average 30 consecutive day low flow with an average recurrence frequency of once in 5 years determined hydrologically; and the harmonic mean flow is a long term mean flow value calculated by dividing the number of daily flows analyzed by the sum of the reciprocals of those daily flows.

(iii) If a State does not have such a low flow value for numeric standards compliance, then none shall apply and the criteria included in paragraph (d) of this section herein apply at all flows.

(3) The aquatic life criteria in the matrix in paragraph (b) of this section apply as follows:

(i) For waters in which the salinity is equal to or less than 1 part per thousand 95% or more of the time, the applicable criteria are the freshwater criteria in Column B;

(ii) For waters in which the salinity is equal to or greater than 10 parts per thousand 95% or more of the time, the applicable criteria are the saltwater criteria in Column C; and

(iii) For waters in which the salinity is between 1 and 10 parts per thousand as defined in paragraphs (c)(3) (i) and (ii) of this section, the applicable criteria are the more stringent of the freshwater or saltwater criteria. However, the Regional Administrator may approve the use of the alternative freshwater or saltwater criteria if scientifically defensible information and data demonstrate that on a site-specific basis the biology of the waterbody is dominated by freshwater aquatic life and that freshwater criteria are more appropriate; or conversely, the biology of the waterbody is dominated by saltwater aquatic life and that saltwater criteria are more appropriate.

(4) *Application of metals criteria.* (i) For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, the minimum hardness allowed for use in those equations shall not be less than 25 mg/l, as calcium carbonate, even if the actual ambient hardness is less than 25 mg/l as calcium carbonate. The maximum hardness value for use in those equations shall not exceed 400 mg/l as calcium carbonate, even if the actual ambient hardness is greater than 400 mg/l as calcium carbonate. The same provisions apply for calculating the metals criteria for the comparisons provided for in paragraph (c)(3)(iii) of this section.

(ii) The hardness values used shall be consistent with the design discharge conditions established in paragraph (c)(2) of this section for flows and mixing zones.

(iii) Except where otherwise noted, the criteria for metals (compounds #2, #4–# 11, and #13, in paragraph (b) of this section) are expressed as dissolved metal. For purposes of calculating aquatic life criteria for metals from the equations in footnote m. in the criteria matrix in paragraph (b)(1) of this section and the equations in paragraphs (b)(2) of this section, the water-effect ratio is computed as a specific pollutant's acute or chronic toxicity values measured in water from the site covered by the standard, divided by the respective acute or chronic toxicity value in laboratory dilution water.

(d) *Criteria for Specific Jurisdictions*—(1) *Rhode Island, EPA Region 1.* (i) All waters assigned to the following use classifications in the Water Quality Regulations for Water Pollution Control adopted under Chapters 46–12, 42–17.1, and 42–35 of the General Laws of Rhode Island are subject to the criteria in paragraph (d)(1)(ii) of this section, without exception:

6.21 Freshwater	6.22 Saltwater:
Class A	Class SA
Class B	Class SB
Class C	Class SC

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(1)(i) of this section:

Use classification	Applicable criteria
Class A Class B waters where water supply use is designated	These classifications are assigned the criteria in Column D1—#2, 68

Use classification	Applicable criteria
Class B waters where water supply use is not designated. Class C; Class SA; Class SB; Class SC	Each of these classifications is assigned the criteria in: Column D2—#2, 68

(iii) The human health criteria shall be applied at the 10^{-5} risk level, consistent with the State policy. To determine appropriate value for carcinogens, see footnote c in the criteria matrix in paragraph (b)(1) of this section.

(2) *Vermont, EPA Region 1.* (i) All waters assigned to the following use classifications in the Vermont Water Quality Standards adopted under the authority of the Vermont Water Pollution Control Act (10 V.S.A., Chapter 47) are subject to the criteria in paragraph (d)(2)(ii) of this section, without exception:

Class A
Class B
Class C

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(2)(i) of this section:

Use classification	Applicable criteria
Class A	This classification is assigned criteria in:
Class B waters where water supply use is designated	Column B2—#105
Class B waters where water supply use is not designated Class C.	These classifications are assigned all the criteria in: Column B2—#105 Column D2—#2

(iii) The human health criteria shall be applied at the State-proposed 10^{-6} risk level.

(3) *New Jersey, EPA Region 2.* (i) All waters assigned to the following use classifications in the New Jersey Administrative Code (N.J.A.C.) 7:9–4.1 et seq., Surface Water Quality Standards, are subject to the criteria in paragraph (d)(3)(ii) of this section, without exception.

N.J.A.C. 7:9–4.12(b): Class PL
N.J.A.C. 7:9–4.12(c): Class FW2
N.J.A.C. 7:9–4.12(d): Class SE1
N.J.A.C. 7:9–4.12(e): Class SE2
N.J.A.C. 7:9–4.12(f): Class SE3
N.J.A.C. 7:9–4.12(g): Class SC
N.J.A.C. 7:9–4.13(a): Delaware River Zones 1C, 1D, and 1E
N.J.A.C. 7:9–4.13(b): Delaware River Zone 2
N.J.A.C. 7:9–4.13(c): Delaware River Zone 3
N.J.A.C. 7:9–4.13(d): Delaware River Zone 4
N.J.A.C. 7:9–4.13(e): Delaware River Zone 5
N.J.A.C. 7:9–4.13(f): Delaware River Zone 6

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(3)(i) of this section:

Use classification	Applicable criteria
PL (Freshwater Pinelands), FW2	These classifications are assigned the criteria in: Column B1—all except #102, 105, 107, 108, 111, 112, 113, 115, 117, and 118. Column B2—all except #105, 107, 108, 111, 112, 113, 115, 117, 118, 119, 120, 121, 122, 123, 124, and 125a. Column D1—all at a 10^{-6} risk level except #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105; #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105, at a 10^{-5} risk level. Column D2—all at a 10^{-6} risk level except #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105; #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105, at a 10^{-5} risk level.
PL (Saline Water Pinelands), SE1, SE2, SE3, SC	These classifications are each assigned the criteria in: Column C1—all except #102, 105, 107, 108, 111, 112, 113, 115, 117, and 118. Column C2—all except #105, 107, 108, 111, 112, 113, 115, 117, 118, 119, 120, 121, 122, 123, 124, and 125a. Column D2—all at a 10^{-6} risk level except #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105; #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105, at a 10^{-5} risk level.
Delaware River zones 1C, 1D, 1E, 2, 3, 4, 5 and Delaware Bay zone 6	These classifications are each assigned the criteria in: Column B1—all. Column B2—all.

Use classification	Applicable criteria
	Column D1—all at a 10^{-6} risk level except #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105; #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105, at a 10^{-5} risk level. Column D2—all at a 10^{-6} risk level except #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105; #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105, at a 10^{-5} risk level.
Delaware River zones 3, 4, and 5, and Delaware Bay zone 6	These classifications are each assigned the criteria in: Column C1—all. Column C2—all. Column D2—all at a 10^{-6} risk level except #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105; #23, 30, 37, 38, 42, 68, 89, 91, 93, 104, 105, at a 10^{-5} risk level.

(iii) The human health criteria shall be applied at the State-proposed 10^{-6} risk level for EPA rated Class A, B_1, and B_2 carcinogens; EPA rated Class C carcinogens shall be applied at 10^{-5} risk level. To determine appropriate value for carcinogens, see footnote c. in the matrix in paragraph (b)(1) of this section.

(4) *Puerto Rico, EPA Region 2.* (i) All waters assigned to the following use classifications in the Puerto Rico Water Quality Standards (promulgated by Resolution Number R–83–5–2) are subject to the criteria in paragraph (d)(4)(ii) of this section, without exception.

Article 2.2.2—Class SB
Article 2.2.3—Class SC
Article 2.2.4—Class SD

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(4)(i) of this section:

Use classification	Applicable criteria
Class SD	This Classification is assigned criteria in: Column B1—all, except: 10, 102, 105, 107, 108, 111, 112, 113, 115, 117, and 126. Column B2—all, except: 105, 107, 108, 112, 113, 115, and 117. Column D1—all, except: 6, 14, 105, 112, 113, and 115. Column D2—all, except: 14, 105, 112, 113, and 115.
Class SB, Class SC	These Classifications are assigned criteria in: Column C1—all, except: 4, 5b, 7, 8, 10, 11, 13, 102, 105, 107, 108, 111, 112, 113, 115, 117, and 126. Column C2—all, except: 4, 5b, 10, 13, 108, 112, 113, 115, and 117. Column D2—all, except: 14, 105, 112, 113, and 115.

(iii) The human health criteria shall be applied at the State-proposed 10^{-5} risk level. To determine appropriate value for carcinogens, see footnote c, in the criteria matrix in paragraph (b)(1) of this section.

(5) *District of Columbia, EPA Region 3.*

(i) All waters assigned to the following use classifications in chapter 11 Title 21 DCMR, Water Quality Standards of the District of Columbia are subject to the criteria in paragraph (d)(5)(ii) of this section, without exception:

1101.2 Class C waters

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classification identified in paragraph (d)(5)(i) of this section:

Use classification	Applicable criteria
Class C	This classification is assigned the additional criteria in: Column B2—#10, 118, 126 Column D1—#15, 16, 44, 67, 68, 79, 80, 81, 88, 114, 116, 118.

(iii) The human health criteria shall be applied at the State-adopted 10^{-6} risk level.

(6) *Florida, EPA Region 4.*

(i) All waters assigned to the following use classifications in Chapter 17–301 of the Florida Administrative Code (i.e., identified in Section 17–302.600) are subject to the criteria in paragraph (d)(6)(ii) of this section, without exception:

Class I
Class II
Class III

(ii) The following criteria from the matrix paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(6)(i) of this section:

Use classification	Applicable criteria
Class I	This classification is assigned the criteria in: Column D1—#16
Class II Class III (marine)	This classification is assigned the criteria in: Column D2—#16
Class III (freshwater)	This classification is assigned the criteria in: Column D2—#16

(iii) The human health criteria shall be applied at the State-adopted 10^{-6} risk level.

(7) *Michigan, EPA Region 5.*

(i) All waters assigned to the following use classifications in the Michigan Department of Natural Resources Commission General Rules, R 323.1100 designated uses, as defined at R 323.1043. Definitions; A to N, (i.e., identified in Section (g) ''Designated use'') are subject to the criteria in paragraph (d)(7)(ii) of this section, without exception:

Agriculture
Navigation
Industrial Water Supply
Public Water Supply at the Point of Water Intake
Warmwater Fish
Other Indigenous Aquatic Life and Wildlife
Partial Body Contact Recreation

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(7)(i) of this section:

Use classification	Applicable criteria
Public Water supply	This classification is assigned the criteria in: Column B1—all, Column B2—all, Column D1—all.
All other designations	These classifications are assigned the criteria in: Column B1—all, Column B2—all, and Column D2—all.

(iii) The human health criteria shall be applied at the State-adopted 10^{-5} risk level. To determine appropriate value for carcinogens, see footnote c in the criteria matrix in paragraph (b)(1) of this section.

(8) *Arkansas, EPA Region 6.*

(i) All waters assigned to the following use classification in section 4C (Waterbody uses) identified in Arkansas Department of Pollution Control and Ecology's Regulation No. 2 as amended and entitled, ''Regulation Establishing Water Quality Standards for Surface Waters of the State of Arkansas'' are subject to the criteria in paragraph (d)(8)(ii) of this section, without exception:

Extraordinary Resource Waters
Ecologically Sensitive Waterbody
Natural and Scenic Waterways
Fisheries:
  (1) Trout
  (2) Lakes and Reservoirs
  (3) Streams
    (a) Ozark Highlands Ecoregion
    (b) Boston Mountains Ecoregion
    (c) Arkansas River Valley Ecoregion
    (d) Ouachita Mountains Ecoregion
    (e) Typical Gulf Coastal Ecoregion
    (f) Spring Water-influenced Gulf Coastal Ecoregion
    (g) Least-altered Delta Ecoregion
    (h) Channel-altered Delta Ecoregion
Domestic Water Supply

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classification identified in paragraph (d)(8)(i) of this section:

Use classification	Applicable criteria
Extraordinary Resource Waters Ecologically Sensitive Waterbody Natural and Scenic Waterways Fisheries: (1) Trout (2) Lakes and Reservoirs (3) Streams (a) Ozark Highlands Ecoregion (b) Boston Mountains Ecoregion (c) Arkansas River Valley Ecoregion (d) Ouachita Mountains Ecoregion (e) Typical Gulf Coastal Ecoregion (f) Spring Water-influenced Gulf Coastal Ecoregion (g) Least-altered Delta Ecoregion (h) Channel-altered Delta Ecoregion	These uses are each assigned the criteria in— Column B1—#4, 5a, 5b, 6, 7, 8, 9, 10, 11, 13, 14 Column B2—#4, 5a, 5b, 6, 7, 8, 9, 10, 13, 14

(9) *Kansas, EPA Region 7.*

(i) All waters assigned to the following use classification in the Kansas Department of Health and Environment regulations, K.A.R. 28–16–28b through K.A.R. 28–16–28f, are subject to the criteria in paragraph (d)(9)(ii) of this section, without exception.

Section (2)(A)—Special Aquatic Life Use Waters
Section (2)(B)—Expected Aquatic Life Use Waters
Section (2)(C)—Restricted Aquatic Life Use Waters
Section (3)—Domestic Water Supply.
Section (4)—Food Procurement Use.

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(9)(i) of this section:

Use classification	Applicable criteria
Sections (2)(A), (2)(B), (2)(C), (4).	These classifications are each assigned criteria as follows: Column B1, #2, 4 Column B2, #4 Column D2, #2, 12, 21, 29, 39, 46, 68, 79, 81, 86, 93, 104, 114, 118
Section (3)	This classification is assigned all criteria in: Column D1, all except #1, 9, 12, 14, 15, 17, 22, 33, 36, 39, 44, 75, 77, 79, 90, 112, 113, and 115.

(iii) The human health criteria shall be applied at the State-adopted 10^{-6} risk level.

(10) *California, EPA Region 9.*

(i) All waters assigned any aquatic life or human health use classifications in the Water Quality Control Plans for the various Basins of the State (''Basin Plans''), as amended, adopted by the California State Water Resources Control Board (''SWRCB''), except for ocean waters covered by the Water Quality Control Plan for Ocean Waters of California (''Ocean Plan'') adopted by the SWRCB with resolution Number 90–27 on March 22, 1990, are subject to the criteria in paragraph (d)(10)(ii) of this section, without exception. These criteria amend the portions of the existing State standards contained in the Basin Plans. More particularly these criteria amend water quality criteria contained in the Basin Plan Chapters specifying water quality objectives (the State equivalent of federal water quality criteria) for the toxic pollutants identified in paragraph (d)(10)(ii) of this section. Although the State has adopted several use designations for each of these waters, for purposes of this action, the specific standards to be applied in paragraph (d)(10)(ii) of this section are based on the presence in all waters of some aquatic life designation and the presence or absence of the MUN use designation (Municipal and domestic supply). (See Basin Plans for more detailed use definitions.)

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the water and use classifications defined in paragraph (d)(10)(i) of this section and identified below:

Water and use classification	Applicable criteria
Waters of the State defined as bays or estuaries except the Sacramento-San Joaquin Delta and San Francisco Bay	These waters are assigned the criteria in: Column B1—pollutants 5a and 14 Column B2—pollutants 5a and 14 Column C1—pollutant 14 Column C2—pollutant 14 Column D2—pollutants 1, 12, 17, 18, 21, 22, 29, 30, 32, 33, 37, 38, 42–44, 46, 48, 49, 54, 59, 66, 67, 68, 78–82, 85, 89, 90, 91, 93, 95, 96, 98
Waters of the Sacramento—San Joaquin Delta and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) that include a MUN use designation	These waters are assigned the criteria in: Column B1—pollutants 5a and 14 Column B2—pollutants 5a and 14 Column D1—pollutants 1, 12, 15, 17, 18, 21, 22, 29, 30, 32, 33, 37, 38, 42–48, 49, 59, 66, 67, 68, 78–82, 85, 89, 90, 91, 93, 95, 96, 98
Waters of the State defined as inland without an MUN use designation	These waters are assigned the criteria in: Column B1—pollutants 5a and 14 Column B2—pollutants 5a and 14 Column D2—pollutants 1, 12, 17, 18, 21, 22, 29, 30, 32, 33, 37, 38, 42–44, 46, 48, 49, 54, 59, 66, 67, 68, 78–82, 85, 89, 90, 91, 93, 95, 96, 98
Waters of the San Joaquin River from the mouth of the Merced River to Vernalis	In addition to the criteria assigned to these waters elsewhere in this rule, these waters are assigned the criteria in: Column B2—pollutant 10
Waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to the mouth of the Merced River	In addition to the criteria assigned to these waters elsewhere in this rule, these waters are assigned the criteria in: Column B1—pollutant 10 Column B2—pollutant 10
Waters of San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta	These waters are assigned the criteria in: Column B1—pollutants 5a, 10* and 14 Column B2—pollutants 5a, 10* and 14 Column C1—pollutant 14 Column C2—pollutant 14 Column D2—pollutants 1, 12, 17, 18, 21, 22, 29, 30, 32, 33, 37, 38, 42–44, 46, 48, 49, 54, 59, 66, 67, 68, 78–82, 85, 89, 90, 91, 93, 95, 96, 98

Water and use classification	Applicable criteria
All inland waters of the United States or enclosed bays and estuaries that are waters of the United States that include an MUN use designation and that the State has either excluded or partially excluded from coverage under its Water Quality Control Plan for Inland Surface Waters of California, Tables 1 and 2, or its Water Quality Control Plan for Enclosed Bays and Estuaries of California, Tables 1 and 2, or has deferred applicability of those tables. (Category (a), (b), and (c) waters described on page 6 of Water Quality Control Plan for Inland Surface Waters of California or page 6 of its Water Quality Control Plan for Enclosed Bays and Estuaries of California.)	These waters are assigned the criteria for pollutants for which the State does not apply Table 1 or 2 standards. These criteria are: Column B1—all pollutants Column B2—all pollutants Column D1—all pollutants except #2
All inland waters of the United States that do not include an MUN use designation and that the State has either excluded or partially excluded from coverage under its Water Quality Control Plan for Inland Surface Waters of California, Tables 1 and 2, or has deferred applicability of these tables. (Category (a), (b), and (c) waters described on page 6 of Water Quality Control Plan for Inland Surface Waters of California.)	These waters are assigned the criteria for pollutants for which the State does not apply Table 1 or 2 standards. These criteria are: Column B1—all pollutants Column B2—all pollutants Column D2—all pollutants except #2
All enclosed bays and estuaries that are waters of the United States that do not include an MUN designation and that the State has either excluded or partially excluded from coverage under its Water Quality Control Plan for Inland Surface Waters of California, Tables 1 and 2, or its Water Quality Control Plan for Enclosed Bays and Estuaries of California, Tables 1 and 2, or has deferred applicability of those tables. (Category (a), (b), and (c) waters described on page 6 of Water Quality Control Plan for Inland Surface Waters of California or page 6 of its Water Quality Control Plan for Enclosed Bays and Estuaries of California.)	These waters are assigned the criteria for pollutants for which the State does not apply Table 1 or 2 standards. These criteria are: Column B1—all pollutants Column B2—all pollutants Column C1—all pollutants Column C2—all pollutants Column D2—all pollutants except #2

*The fresh water selenium criteria are included for the San Francisco Bay estuary because high levels of bioaccumulation of selenium in the estuary indicate that the salt water criteria are underprotective for San Francisco Bay.

(iii) The human health criteria shall be applied at the State-adopted 10^{-6} risk level.

(11) *Nevada, EPA Region 9.* (i) All waters assigned the use classifications in Chapter 445 of the Nevada Administrative Code (NAC), Nevada Water Pollution Control Regulations, which are referred to in paragraph (d)(11)(ii) of this section, are subject to the criteria in paragraph (d)(11)(ii) of this section, without exception. These criteria amend the existing State standards contained in the Nevada Water Pollution Control Regulations. More particularly, these criteria amend or supplement the table of numeric standards in NAC 445.1339 for the toxic pollutants identified in paragraph (d)(11)(ii) of this section.

(ii) The following criteria from matrix in paragraph (b)(1) of this section apply to the waters defined in paragraph (d)(11)(i) of this section and identified below:

Water and use classification	Applicable criteria
Waters that the State has included in NAC 445.1339 where Municipal or domestic supply is a designated use	These waters are assigned the criteria in: Column B1—pollutant #118 Column B2—pollutant #118 Column D1—pollutants #15, 16, 18, 19, 20, 21, 23, 26, 27, 29, 30, 34, 37, 38, 42, 43, 55, 58–62, 64, 66, 73, 74, 78, 82, 85, 87–89, 91, 92, 96, 98, 100, 103, 104, 105, 114, 116, 117, 118
Waters that the State has included in NAC 445.1339 where Municipal or domestic supply is not a designated use	These waters are assigned the criteria in: Column B1—pollutant #118 Column B2—pollutant #118 Column D2—all pollutants except #2.

(iii) The human health criteria shall be applied at the 10^{-5} risk level, consistent with State policy. To determine appropriate value for carcinogens, see footnote c in the criteria matrix in paragraph (b)(1) of this section.

(12) *Alaska, EPA Region 10.*

(i) All waters assigned to the following use classifications in the Alaska Administrative Code (AAC), Chapter 18 (i.e., identified in 18 AAC 70.020) are subject to the criteria in paragraph (d)(12)(ii) of this section, without exception:

70.020.(1) (A) Fresh Water
70.020.(1) (A) Water Supply
(i) Drinking, culinary, and food processing,
(iii) Aquaculture;
70.020.(1) (B) Water Recreation
(i) Contact recreation,
(ii) Secondary recreation;
70.020.(1) (C) Growth and propagation of fish, shellfish, other aquatic life, and wildlife
70.020.(2) (A) Marine Water
70.020.(2) (A) Water Supply
(i) Aquaculture,
70.020.(2) (B) Water Recreation
(i) contact recreation,
(ii) secondary recreation;
70.020.(2) (C) Growth and propagation of fish, shellfish, other aquatic life, and wildlife;
70.020.(2) (D) Harvesting for consumption of raw mollusks or other raw aquatic life.

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(12)(i) of this section:

Use classification	Applicable criteria
(1)(A) i	Column B1—#9, 10, 13, 53, and 126 Column B2—#10 Column D1 #'s 16, 18–21, 23, 26, 27, 29, 30, 32, 37, 38, 42–44, 53, 55, 59–62, 64, 66, 68, 73, 74, 78, 82, 85, 88, 89, 91–93, 96, 98, 102–105, 107–111, 117–126
(1)(A) iii	Column B1—#9, 10, 13, 53, and 126 Column B2—#10 Column D2 #'s 14, 16, 18–21, 22, 23, 26, 27, 29, 30, 32, 37, 38, 42–44, 46, 53, 54, 55, 59–62, 64, 66, 68, 73, 74, 78, 82, 85, 88–93, 95, 96, 98, 102–105, 107–111, 115–126
(1)(B)i, (1)(B) ii, (1)(C)	Column B1—#9, 10, 13, 53, and 126 Column B2—#10 Column D2 #'s 14, 16, 18–21, 22, 23, 26, 27, 29, 30, 32, 37, 38, 42–44, 46, 53, 54, 55, 59–62, 64, 66, 68, 73, 74, 78, 82, 85, 88–93, 95, 96, 98, 102–105, 107–111, 115–126
(2)(A) i, (2)(B)i, and (2)(B)ii, (2)(C), (2)(D)	Column C1—#9, 10, 13, and 53 Column C2—#10 Column D2 #'s 14, 16, 18–21, 22, 23, 26, 27, 29, 30, 32, 37, 38, 42–44, 46, 53, 54, 55, 59–62, 64, 66, 68, 73, 74, 78, 82, 85, 88–93, 95, 96, 98, 102–105, 107–111, 115–126

(iii) The human health criteria shall be applied at the State-proposed risk level of 10^{-5}. To determine appropriate value for carcinogens, see footnote c in the criteria matrix in paragraph (b)(1) of this section.

(13) [Reserved]

(14) *Washington, EPA Region 10.*

(i) All waters assigned to the following use classifications in the Washington Administrative Code (WAC), Chapter 173–201 (i.e., identified in WAC 173–201–045) are subject to the criteria in paragraph (d)(14)(ii) of this section, without exception:

173–201–045
Fish and Shellfish
Fish
Water Supply (domestic)
Recreation

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(14)(i) of this section:

Use classification	Applicable criteria
Fish and Shellfish; Fish	These classifications are assigned the criteria in: Column C2—6, 14 Column D2—all
Water Supply (domestic)	These classifications are assigned the criteria in: Column D1—all
Recreation	This classification is assigned the criteria in: Column D2—Marine waters and freshwaters not protected for domestic water supply

(iii) The human health criteria shall be applied at the State proposed risk level of 10^{-6}.

[57 FR 60910, Dec. 22, 1992; 58 FR 31177, June 1, 1993, as amended at 58 FR 34499, June 25, 1993; 58 FR 36142, July 6, 1993; 60 FR 22229, 22235, May 4, 1995; 60 FR 44120, Aug. 24, 1995; 61 FR 60617, Nov. 29, 1996; 62 FR 52927, Oct. 9, 1997; 62 FR 53214, Oct. 10, 1997; 63 FR 10144, Mar. 2, 1998; 64 FR 61193, Nov. 9, 1999; 65 FR 19661, Apr. 12, 2000]

§ 131.37 California.

(a) *Additional criteria.* The following criteria are applicable to waters specified in the Water Quality Control Plan for Salinity for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, adopted by the California State Water Resources Control Board in State Board Resolution No. 91–34 on May 1, 1991:

(1) *Estuarine habitat criteria.* (i) *General rule.* (A) Salinity (measured at the surface) shall not exceed 2640 micromhos/centimeter specific conductance at 25 °C (measured as a 14-day moving average) at the Confluence of the Sacramento and San Joaquin Rivers throughout the period each year from February 1 through June 30, and shall not exceed 2640 micromhos/centimeter specific conductance at 25 °C (measured as a 14-day moving average) at the specific locations noted in Table 1 near Roe Island and Chipps Island for the number of days each month in the February 1 to June 30 period computed by reference to the following formula:

Number of days required in Month X = Total number of days in Month X * $(1 - 1/(1+e^{K})$

where

K = A + (B*natural logarithm of the previous month's 8-River Index);
A and B are determined by reference to Table 1 for the Roe Island and Chipps Island locations;
x is the calendar month in the February 1 to June 30 period;
and e is the base of the natural (or Napierian) logarithm.

Where the number of days computed in this equation in paragraph (a)(1)(i)(A) of this section shall be rounded to the nearest whole number of days. When the previous month's 8-River Index is less than 500,000 acre-feet, the number of days required for the current month shall be zero.

TABLE 1. CONSTANTS APPLICABLE TO EACH OF THE MONTHLY EQUATIONS TO DETERMINE MONTHLY REQUIREMENTS DESCRIBED.

Month X	Chipps Island		Roe Island (if triggered)	
	A	B	A	B
Feb	−[1]	−[1]	−14.36	+2.068
Mar	−105.16	+15.943	−20.79	+2.741
Apr	−47.17	+6.441	−28.73	+3.783
May	−94.93	+13.662	−54.22	+6.571